

# GREAT LAKES TECHNOCRAT

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# GREAT LAKES TECHNOCRAT

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Illustrating the Futility of Price System Methods of Operation; Interpreting the Trend of Events from the Social Aspects of Science; and Presenting the Specifications for Total Mobilization for Peace!

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# Gullible's Travels

Tell Me A Funny Story, Daddy

By The Peripatetic Technocrat

Based on a story in the February, 1946, issue of *The Technogram*, 12245-1 by Archie Sinclair and Joan Forbish.

My little friend Grildrig, you have made a most admirable panegyric upon your country; you have clearly proved that ignorance, idleness, and vice are the proper ingredients for qualifying a legislator; that laws are best explained, interpreted, and applied by those whose interests and abilities lie in perverting, confounding, and eluding them.

I observe among you some lines of an institution which, in its original, might have been tolerable, but these half erased, and the rest wholly blurred and blotted by corruptions . . . . As for yourself, who have spent the greatest part of your life in travelling, I am well disposed to hope you may hitherto have escaped many vices of your country.

'But by what I have gathered from your own relation, and the answers I have with much pains wringed and extorted from you, I cannot but conclude the bulk of your natives to be the most pernicious race of little odious vermin that Nature ever suffered to crawl upon the surface of the earth.' (The King of Brobdingnag in "Gulliver's Travels," written by Jonathan Swift in 1728.)

## Stop Me If You've Heard This One

Once upon a time there was a mighty Nimrod. He was famed far and wide as the greatest elephant hunter of them all. He brought 'em back alive and he brought 'em back in bunches.

This Nimrod of nimrods was a lone wolf. Not for him was the grand safari with carriers, gunbearers and a lot of equipment. He hunted alone.

Strange to relate his only weapons were a large blackboard, a piece of chalk, an opera glass, a pair of small tweezers and a couple of empty, quart size, Mason jars. For years he refused to reveal the secret of his great success. Finally, when he came to his death bed he relented and told the following story.

I set the blackboard up in an open space where all the elephants can see it. Then I take the chalk and write in big figures  $2+2=5$ . Then I hide in the bush. Pretty soon an inquisitive elephant comes around to see what's going on. He

looks at the figures, scratches his floppy ears with his long trunk and then calls some of his pals over to have a look.

They read the figures and start laughing. Pretty soon they're rolling on the ground in uncontrollable fits, each one trying to keep his two sides from splitting with laughter. That's the point where I come in.

You see, nature equipped each elephant with only one trunk. When they get so tickled over my phony arithmetic that they have to try to hold their both sides at the same time with one trunk they're at my mercy. My next step is to take the opera glass, reverse it and look at the elephants through the small end. I adjust the focus until they're as tiny as baby field mice. Then I pick them up with the tweezers and put them into jars. That's all there is to it.

## 'There Are More Things—Horatio'

Holy jumping smokes! Why didn't we think of that? Wait till N.A.M. hears about this. They'll do nip-ups all over Wall Street. Here is the an-



swer to our postwar headaches. It may even be the solution to all our social problems. All we have to do is look at them through the small end of the glass until they become tiny enough to handle with our contemporary political and financial Rules of Operation. Then we've got the situation licked.

No more of this scientific nonsense of trying to get a correct measure of the growing magnitude and complexity of our social maladjustments. No more surveys, polls or congressional investigations. They only furnish ammunition for those 'damn reds.' That stuff is all obsolete now. We have a magical new formula.

We'll just lean back and look at our social mess through the reducing end of the glass. Then we'll wait and wait and wait. After all, didn't Fabius Maximus (the Delayer) win great victories against the Carthaginians by raising procrastination to the status of an art? Didn't Abe Linclon stall off many a pestiferous job hunter with a funny story? Didn't the good old U.S.A. procrastinate itself back to 'normalcy' once before with the Ohio gang? That was a bing, bang, bang that was heard from Teapot Dome to the remotest corner of the fatherland. Didn't we keep procrastinatingly cool with Coolidge for four years? Finally, didn't we get a procrastinated chicken-in-every-pot (almost) with Hoover? And didn't we almost lose the pot later? Ooops! That last sentence just slipped out. But, if you remember, there wasn't much procrastination about the way we didn't get two chickens in every pot and a couple of tin lizzies to boot in every garage.

Still, it wouldn't be fair to blame that debacle on the 'Great Engineer.' It was those 'damn reds.' Yes, the more we think of it, the more we like this new idea. Let's reduce our

social problems to a size that our pigmy politicians can handle. Let's appease everybody and stall for time. Those pressure groups that we can't appease, we can always bribe. Ooops! There it goes again. We mean subsidize. If any damn fool Quixotes start demanding social action in Congress, by Gad, Sir, we'll filibuster them to death. Political democracy is history's greatest device for social procrastination.

### *'Damn The Torpedoes, Go Ahead'*

Come to think of it, the filibuster is in line with our best traditions. After all, haven't we always filibustered against our social problems instead of solving them? The two-legged ones we filibustered into poorhouses, penitentiaries and insane asylums. The economic and resource problems we got rid of by giving the country away to foreigners. We called it 'foreign trade.' We gave them the money and they traded it back to us for our resources. It is written that it is more blessed to give than to receive.

What's to prevent us from turning the rest of America over to foreign powers? Then there wouldn't be any more economic and resource problems. We could equalize and stabilize scarcity everywhere. But, there wouldn't be any more country left either. Ooops! That's the third time. Darn it! There must be some devil of contrariness haunting this inquiry. Umm! Let's See! No, it can't be that. Yes, it is! By golly, I see it all now. That's it! What we have been saying here is just exactly what we, as a people, have been doing for the last thirty odd years. Let's go back further than that.

In the beginning, our founding fathers got off to a bad start. This was because they imported the European Price System of Trade and Commerce along with their firewater and



holy writ. The firewater and holy writ would have been all right if they had only left the ancient and lousy Price System behind. However, it seems that the three go together on all exploration and colonization ventures. At least, they always have.

After that, we proceeded to take the Continent away from the native Indians. This was history's slickest job of expropriation. The weapons used were cheap glass beads and baubles, steel knives, firearms, treaty breaking, starvation, concentration camps, segregation, assassination and, of course, firewater and holy writ.

The Indian's fealty had always said: 'I belong to this land.' That's about what you'd expect from a dumb Indian. Our improved Price System fealty said: 'This land belongs to me.' In view of the Indian's dumb attachment to the physical Continent that bore him, you can easily see that his removal was a blessing to civilization. Of course, this land belongs to us, until erosion, waste, dust, degradation and death do us part. Yea, verily! The white man's burden grows heavy at times. We managed to bear up heroically, however. Besides, it was very good business.

After that we settled down for a long spree under the tri-color of 'free enterprise' business, politics and clericalism. We headed straight for that blue heaven of the Price System, perpetual expansion and prosperity, compounded at 6 percent.

### *Something New Was Added*

About that time the steam engine came in. It was followed shortly by the cotton gin, the railroad and steamship. The factory system of production became possible. The first blast furnaces and rolling mills were built. Power looms, iron plows, reapers and

seed drills were developed. The American Price System began to expand. It grew like Jack and the Beanstalk. Remember what a heck of a time Jack had reaching the top of the stalk because it grew faster than he could climb. So, for a long time, the Price System expanded faster than the technology causing the expansion. Times were good. American free enterprise became the umpteenth wonder of the universe.

In the middle of this heavenly process, a slight interruption occurred. It was called the Civil War. After having thrived mightily by kidnapping Negroes from their warm habitat in Africa and selling them as slaves in the warm territory of this country, we decided to abolish slavery. We wiped out the plantation culture, struck the iron chains from the slaves' legs, imprisoned them more securely with the invisible chains of economic compulsion, and sent the carpet baggers all over the South to reorganize it along more approved Price System lines. It cost us only about 800,000 American lives.

With that righteous duty out of the way, we marched on to greater and greater Price System victories. A new series of developments came to help the good cause along. Among them were the telegraph, telephone, turbine, internal combustion motor, vulcanized rubber, the gang plow, binder, separator, tractor, artificial fertilization, irrigation and the homesteading of the west. We roared along, tearing up the Continent and leaving it in ruin behind us.

We cut the timber from Maine to Minnesota to Washington. We cut and moved, cut and moved, laying the land bare behind us to be washed away by wind and rain. We mined the soil from the Atlantic to the Mississippi and on out to the far reaches



of the Great Plains. We mined for crops and when the land yielded no more, we left it to bleach in the sun and run in the floodwaters down to the sea. We moved on to better picking. 'We built a hundred cities and a thousand towns.' The cost? It cost only about 5/6ths of America's forests and a half of her cropland.

### *Columbia, The Gem Of The Ocean*

We came at length to the opening of the 20th Century. The frontier was gone, gobbled up by the great mass migration of big and little free enterprisers, each one bent upon chiseling out a preferred spot for himself. The Power Age was upon us. But we didn't know it. Socially speaking, we didn't know our own hind foot from a hole in the ground. Most of us don't to this day. All we ever knew, as a people, was to get while the getting was good, and damn the dopes who might hint otherwise. The rope was getting shorter, however. We were soon to come face to face with some of the hard facts of life. We were soon to learn that physical laws can't be violated. They will take their relentless toll sooner or later.

The new century witnessed a new series of developments destined to expand the American Price System still further. In came the mass production of interchangeable parts, electrification of industry, automatic mechanisms, technological processes, the photo-electric cell and electronic tube, making possible large scale operations in automobiles, trucks, aviation, ship-building, radio, television, ferrous and non-ferrous alloys, light metals, wood processing, plastics and synthetics. Alongside this came rural electrification, mechanization of farming, hydroponics and agrobiolgy.

The Power Age was upon us, but we were still rooted faithfully and

asininely in the dead past. When the depression of 1893 struck, we did not know that it was the first major oscillation of the economic system under the impact of technology. There was a 27 percent shutdown in pig iron production. We recovered and expanded to higher levels. The next oscillation of the system occurred in 1908. The shutdown in pig iron reached 38 percent. These oscillations caused financial depressions also. We noticed that and ascribed the events to the mysterious operations of money. No such thing.

The financial phenomena were a symptom of the underlying impact of technology. We did not know that, for there had not yet arrived on the American scene the Man and Organization qualified to diagnose the physical causes of depression.

### *Lafayette, Where Are We?*

The years rolled on. Then a mastoid degenerate with a shriveled arm, sitting on a throne in Central Europe, set the world on fire. The slogan of his goose-stepping puppets was: 'Deutschland Ueber Alles, Ueber Alles In Der Welt.' Well, we couldn't take that. So, we girded our loins, went out and knocked over this Kaiser fellow. We 'made the world safe for Democracy and the rights of small nations.' Also, for the foreign investments of Wall Street. That was most important. We 'dood' it, to the tune of 'Johnny Get Your Gun,' 'Over There,' and 'Keep The Home Fires Burning.'

The home fires didn't burn brightly for very long. In 1921 we were laid low by another oscillation of the economy. This time the shutdown in pig iron was 57 percent. Recovery was slower. However, we managed it with the aid of foreign loans of the give and try to forget type. Then



came the booming twenties financed by more foreign loans, installment buying, and organized crime on a national scale. We jazzed our way through this period, deaf, dumb and blind to everything but bath tub gin, chiseling, tommy guns and stock market gambling. 'Everybody's Doing It Now.'

### *'Not Without Honor—'*

In that Price System wilderness of 1921 there was a social scientist who knew what the score was. The man America needed had arrived. His name is Howard Scott. He spoke up and predicted what would happen. He said:

The increase in total number of kilowatt-hours resulting in increased productive power and diminishing man-hours will compel an industrial and financial crisis by 1930.

Scarcely anybody paid any attention.

Whoever heard of this crackpot engineer? Whoever heard of such nutty reasons for a depression? Every sensible man knows that hard times are caused by the mysterious behavior of money. Why, it's ridiculous! Our economists have drawn up charts going back to 1776 showing how money behaves. Our bankers know all about money. You betcha! They know how to take a buck and lend it out for 6 percent interest. Didn't one of our famous economists prove conclusively that all we needed was 'honest money.' Kilowatt-hours, man-hours, what kind of rubbish is this? On with the dance!

### *'Sky Red In The Morning—'*

October 24, 1929, dawned like any other day. There was nothing to indicate that fate rode up over the Eastern horizon with the Sun that morning. Before it sank into the Western

sea that night \$5,000,000,000 in Price System stock market values had shrunk back into the nothing from whence they came.

America hasn't been the same since. It never will be. Technology wrote across the walls: 'You have been weighed and found wanting.' But, we hang on to the ancient and lousy Price System, like a faithful dog waiting patiently at his master's new-made grave. We hope against hope, and believe against all the facts that somehow or other master will come back to us.

Master didn't recover from the crash of 1929. As the months rolled on, the crisis deepened. Pig iron production dropped off 79 percent. Nineteen thirty, 1931 and 1932 came and went. Conditions worsened. They got so bad that a Congressman, A. J. Sabath (Dem. Ill.) was inspired to write a new psalm. Part of it went like this:

Hoover is my shepherd, I am in want.

He maketh me to lie down on park benches;

He leadeth me beside the still factories, . . .

Yea, though I walk through the valley and shadow of depression,

I anticipate no recovery, for thou art with me . . .

Surely unemployment and poverty will follow me all the days of your administration . . .

Hoover's administration ran through its dreary length. The new deal came in. The money changers were chased out on the front steps of the temple. The still factories remained still. Since nothing else could be done, the American Price System went on Government relief. It's been there ever since. The proud tycoons of finance, business and industry who had bragged



before the world of their genius stooped low down, very low down, and accepted government charity. Between 1934-1945, the U. S. Government paid out in charity handouts (subsidies) to business over \$8,000,000,-000.

Taking all the farm owners and small business men into consideration, there are not quite 10,000,000 established free enterprisers in the U. S. They got the \$8,000,000,000. Relief to people in the form of made work and direct charity during the same period amounted to \$13,000,000,-000. Good old free enterprise, of course, got this on the rebound. People have to eat, don't they? This \$21,-000,000,000 solved nothing. It was money thrown down the rat holes of the Price System. Not a single cause of the depression was attacked, not a single solution worked out. We just drifted. By 1940 there were still 9,-000,000 people unemployed.

*Sieg Heil! Sieg Heil!*

Then another foreign tyrant came to the rescue of the American Price System. A psychopathic, house painter, who had been a corporal in the Kaiser's army, took over Germany. He was vouched for in sanctified and respectable circles, and subsidized by the triple oligarchy in the Western Democracies. These are business, politics and clericalism. Had this Hitler fellow with his nutzy Nazis not been a screwball, all would have been well. He declared a holy crusade against the Bolsheviks. That was fine with American corporate enterprise. He went off the beam, however, and began to make passes at the vested interests on this Continent. That was too much!

So, we girded our loins again and fared forth. We knocked over Nazism, Mussolinism, and Hirohitoism. That is, we did it with the major help of

the despised Bolsheviks. They furnished most of the blood. We furnished most of the money. The capitalists of America and the Western democracies defeated the capitalists of Germany, Italy and Japan. Not once during all the carnage did our government make an official announcement that we were fighting against social fascism. Indeed, we were not. We fought for the preservation of the status quo. Political democracy vs. totalitarianism; Americanism vs. Nazism; the four freedoms vs. dictatorship, but never the people vs. social fascism. 'Tell it not in Gath, publish it not in the streets of Askelon.'

*'The Clock In The Steeple Strikes One'*

Of course, World War 2 made a lot of business. Since June, 1940, the U. S. Government has spent over \$348,000,000,000. That's BIG BUSINESS. Such a terrific injection of purchasing power into the economy is bound to give it new life. It did. For the last six years, the American Price System has prospered as never before. Every Tom, Dick and Mary has had some kind of a job. Every chiseler has grown fat from the easy pickings. Every sucker has approached closer to the dream of all suckers to get to be a chiseler. It's no use, though. All the evidence indicates that our postwar prosperity looks like the last bright flicker of the Price System flame.

It required 10 years after World War No. 1, from 1919 to 1929, for technology to bring the Price System down. This time it may well happen in one-fifth of that time. By two years from V-J Day, or in the Summer of 1947, the American Price System will again show the symptoms of its fatal disease. This time there may be no escape. We have just about used up all our stop-gap alternatives. It's time



to pay the fiddler. What have we to pay with?

As a people, we have always tried to delude ourselves by adding up our social problems wrong. When they grew to proportions impossible to ignore, we looked at them through the small end of the glass. That is, we approached them from the wrong direction. We tried to force them to yield to the slippery propositions of politics, business and finance. It never worked, but that's all we knew. In our singleminded devotion to personal gain and social pusillanimity, we have waxed mighty in our own eyes. We stand naked now before the bar of history, charged with the responsibility to solve social problems that never existed before.

### *Nothing to Fear But The Price System*

From where America stands today, near the end of the Price System road, two unmarked trails stretch off into the future. One goes straight ahead and one goes to the right. The road to the right leads downward into a low, swampy country. It winds downward through the dark forest of social problems that grow ever denser and more insoluble. If one travels it far enough, he can see how it circles around and finally turns back toward the past. At this point it is strewn with the murdered hopes and aspirations of men and women. Its pathway is lined with the lost causes of humanity. Every so often a signboard looms, as we plod along. The first one says: 'Believe as I believe, no more, no less.' After a while we see another. It says: 'That I am right and no one else, confess.' And so on, for dreary century after century, as we plod along the low road that leads to the past.

We perceive that this is the road of social fascism, of authoritarianism.

This is the road onto which the triple oligarchy of business, politics and clericalism wants to force the people of North America. Fascism, after having gutted the subcontinent of Europe for 1,500 years, wants to set up house in North America. It wants to attach itself to the technological culture of this Continent. It wants to cancel out the gains made by Science and Technology in the last two hundred years. It wants to divide up America's abundance with the world that its operations has laid low.

It wants to equalize scarcity everywhere and thus stabilize the status quo on a lower level of living standards. Fascism is a going backward in culture and technology. Any going backward of any type in this Power Age is fascistic. We can learn nothing from the fascist past. The entire record of human history is a record of fascism of one degree or another. Today the apostles of fascism sit in high places. They are fat, smug and respectable. These are the prime movers of fascism. They can be found in every city, town and village of North America. They are of the essence of the Price System.

### *'Properly Ordered And Rock Solid'*

The trail leading straight ahead goes upward to a higher country. There the air is cleaner, the Sun shines brighter, and the land is richer. This is the road that leads to a higher form of civilization with abundance, security, equal opportunity and physical democracy for all citizens. As we push upward, we note a signboard along the road. It says: 'Only that which can be measured is real.' After awhile we see another. It says: 'All phenomena involved in the operation of a social system can be measured.' The road continues on up until it is free from all connection in time, culture and



technology with the fascist past of humanity.

We perceive that this is the high-road of science and technology. Along its sides we see no lost causes, no murdered hopes and aspirations of men. Instead, we note monuments to all the worthwhile things of modern civilization. We note that all of them came about as a result of the advance of science and technology. We note that in the progression of this road, in the type of country it is leading into, Science holds forth promises of still greater benefits to come. We know now that this is the road into the promised land, into the dream that was America, made real.

We hurry back to the forks at the end of the Price System road where the stream of humanity is milling around, not knowing which way to turn. We want to tell everybody that this is the correct road. Upon approaching, we see that more and more people are going straight ahead. Then we notice a huge sign that says: 'Technocracy is Science applied to the social system. This way, Mr. and Mrs. North America.'

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## ***Good Old Free Enterprise***

The old gent had been in business for 40 years. He had a nice store, packed full of merchandise and plenty of money. His son was graduated from high school, and then took a four-year college course, including business administration in every detail. Finally, the son was ready to enter business with papa.

"Dad," he said, "when are you going to take inventory?"

"What do you mean, inventory?"

"Well, said the son, 'you have to know what you have on hand, what it cost you, how much for carry-over, to find out how much you have made, etc.'"

"Son," said papa, "measure that bolt of calico in the top left-hand corner of

So, at last, the Organization as well as the man has arrived, that is qualified to point out the correct direction. After long last, after generations of chiselers, politics, robber barons, smuggler clerical fascists and nice people, North America has produced something worthwhile.

Technocracy has everything. It has the answer to our social problems. It has the deadly correct analysis of the Price System. It has the schematic design of a new and far better social system. This will be a non-political, non-profit, non-sectarian social system, without money and without Price. This type of social system will lift North America up to a far higher plane of civilization. Not only that, it will be the lever and fulcrum that will also lift all the world out of its ages-old morass.

If you doubt this in the slightest degree, you owe it to your own intellectual integrity and the welfare of your country to join Technocracy now and investigate all its claims from the inside.

---

that shelf, and figure out what it is worth. That's what I started with. All the rest of this place is profit."

---

The performing flea and an elephant crossed a jungle bridge together.

'Oh boy,' whispered the flea in the elephant's ear, 'we certainly made that bridge shake!'

---

'The forgotten man works and votes; generally he prays; but his chief business in life is to pay.' (William Graham Sumner, (1840-1910) professor of political economy and social science at Yale University.)



# Never the Twain Shall Meet

The Need for Direction

By Clyde Wilson, R.D. 9140

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Up to 1920, the Price System expanded at a rate of six percent per annum, doubling itself every twelve years. It was possible for this expansion to take place because wages, salaries, rent, etc., were equal to the new building and the production up to that time. We know that it is impossible to continue any system at a compound rate of interest due to the fact that there is a limit to our capacity to consume, and to the resources available. Yet the theory of the Price System is continued expansion at a compound rate. This leads us up to the question of how it is possible for the Price System to keep muddling along.

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## *Barnum Had A Word For It*

It was possible, after so-called World War I, to float bonds abroad (we are doing this now for 'our friends') and through installment buying at home, to keep the Price System going until the crash of 1929. For about three years the people were promised 'two chickens in every pot' while the bread lines became longer and longer. The RFC started to help business while the consumer continued to receive promises of prosperity around the round house. The people couldn't eat promises, so not knowing any better they took the easy way and voted for the New Deal in 1932. Not to disappoint them, the 'new deal' gave them a new deck with the same old rules.

Things were really happening. Something had to be done and fast. It was getting tough. As they say in the Army, some days you couldn't make a dollar. As predicted by Technocracy, the banks closed in April of 1933, to be opened by the government. Rather than pull rabbits out of the hat, the 'new deal' pulled letters from the alphabet. The RFC was put on a big time basis. The government ran its printing presses at full capacity to turn out enough paper to subsidize business enterprise. The

people were given a measly dole to help stimulate business somewhat. The public didn't know when it had been taken in.

By priming the pump, the Price System kept going. In 1936 there was a clamor for the balancing of the unbalanced budget. Again, as predicted by Technocracy, the Price System moved within twenty-two percent of chaos. The government hastily resumed spending. The politico-business operators of the Price System had to make some kind of excuse, so the people were told it was only a 'recession.' The WPA continued, without at any time interfering with business-as-usual. While a greater proportion of the people were ill-fed, ill-clothed and ill-housed, the basic needs of life were being stored, ploughed under, burned, shipped abroad, withheld, and dumped into the ocean. This was the Price System in reaction.

Up to 1941 conditions got worse, not better. There was no solution to the problem, and what's more there isn't now under the Price System. Rigor mortis had set in. The Price System patient was mortally ill. It needed a shot of war to prolong its agony a while longer. And War it was! Even with the declaration of war, business enterprise would not turn a wheel until the government footed



the bill for plant expansion, and furnished a guarantee of a 'reasonable profit' with cost-plus. What price patriotism? The boys were conscripted with no questions asked. Just do and die, they were told. The war took up the disemployment slack and brought lush prosperity while it lasted.

### *This Way, Mr. American*

It is now 1947 and the forgotten war has been over for about two years. You know the condition in which the Nation now finds itself. We spent billions for war—how much for peace? At present our attention is being diverted toward a 'holy war' and away from the domestic problems. It is high time for us to find out why and for what we just fought a war, against and for, before we allow ourselves to be stampeded into not the next war—but the last war.

As Technocracy has pointed out, war was a part of the transition taking place on this Continent for some time. The conditions which existed before the war are with us now, at as ever accelerating rate. This is due to increased energy conversion, which in the final analysis is the primary cause for all social change. This Continent's technology produced more goods in time of war than at any time in its history, while thirteen million men and women were in the armed forces.

Getting back to the home front, we find that while conflicting interests bicker over the spoils, the necessities of life are being by-passed. The only role these pressure groups can play is that of trying to maintain the status quo at public expense. While these trained incompetents sabotage capacity production and distribution, a standing army, with a need for direction, has moved into the national scene demanding recognition. These people,

who have become disemployed, unemployed, migrating homeless, and what have you, are consumers, not 'me first' groups. Discontent among the returned service men and women is evident. On the horizon is the most powerful pressure group ever known in all North American history.

Government, under Price System operation, can resort only to one expediency after another, in the long run aggravating rather than solving the problem. It is only a matter of a short time before the real issues at stake will come to a head. In the meantime, government will continue to subsidize business enterprise by starting a gigantic works program, under the name of full employment, in an attempt 'to maintain consumption and industrial operation at a level to prevent the collapse of the monetary structure.'

The No. 1 need of the North American Continent is an orderly transition into a designed social operation. On this Continent, we have fifty percent of all the resources of the world. We produce sixty percent of the world's goods. Ours is a high energy civilization. We must awaken to the fact of the impact of Technology upon the Price System, and what it means. Also—its potential possibilities for all of us. We must not gear society to meet any situation, but gear it so that there won't be any situation to meet.

Technocracy has the design.

Investigate NOW!

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## **So What?**

'One out of every seven persons in the U. S. will be a war veteran by the time World War II is formally ended. One out of every four eligible voters will be a veteran. (*United States News*, October 11, 1946.)



# Why I Am a Technocrat

Cry It From The Roof Tops

By Bill Raby, 8741-1

In the continuum of eternity we are nothing, in the aggregate of humanity we are few. Yet the nothing is the something of which many things may come, and the few, through their location in space and time, may have the strength of a vast multitude. For at a critical point in man's progression but one voice to give the word, but one hand to point out the correct direction may well spell the difference between barbarism and the higher civilization men have faintly glimpsed. Nothing is surer than that, if now we fall, if now we who have sighted the sun sink back to the slime, we shall sink farther than the muck from which we first rose.

They say of us that we are altruists, that we are crackpots, that we are traitors, that we are saints. They are wrong. We are none of these. We are merely men and women who have looked into the flash of fact and have been dazzled by the promise that science offers us. Though we were never again to feel the searing light of the first glimpse of fact, yet into our eyes and our minds its intelligence has been burned.

*'Abundance exists.'*

That is the great word. ABUNDANCE. That is the blinding report of Technocracy. Yet there is another intelligence. This disclosure, too, is engraved in our being.

*'The Price System is doomed.'*

This intelligence is deep within us, and we cry it ceaselessly to all who will listen. 'Abundance exists!' we cry. 'The Price System is doomed.' If the first is so, and the existence of potential abundance is a FACT, then the

second must follow as surely as a boy follows a girl.

The Price System, any social system effecting its distribution of goods and services by means of a system of trade or commerce, based on commodity valuation and employing any form of debt tokens or money, postulates scarcity. That is the reason abundance dooms the Price System. Scarcity is the Price System's only reason for being. Without scarcity, the Price System fails.

Why? In the Price System, two factors determine the price of any given object. The first of these is supply, which is the amount of the commodity available. The second is demand, which is a compound of desire or need for an object, and ability to buy. Desire or need alone is not demand. Ability to buy alone is not demand. The two must go together.

Further, in the Price System, if the supply is small and the demand great, the price rises. Contrariwise, if the supply is great and the demand small, the price drops. The condition of small supply and large demand is the perfect one for the Price System. The ultimate development of that ideal is perfect monopoly. The opposite condition is anathema. Large supply and small demand spells disaster.

Yet the condition of large supply and small demand is the one the Price System faces. With more goods for less work, the System faces the ironic probability of 'overproduction,' in the sense that there will be no buying power to absorb output, on a continent, where most men have never yet been adequately fed, clothed, or housed.



The Price System remedy is artificial scarcity, the scarcity of the New Deal with its payments for not producing, the scarcity of monopoly which produces less to profit more. But that is the only way that the Price System can survive. So long as the Price System exists, that is the only type of remedy that will be applied to the physical ills of man.

Again, why? Why, because there can be no value in the Price System without supply and demand interacting. And if the supply increases so that it is out of all proportion with the demand, price completely disappears. Air is a good example. It is vital to life, hence the demand probably is large. Yet the supply is, for practical purposes, unlimited. What is the price of air?

So it is in every field, the greater the supply, the less the price, and the less the supply, the greater the price. Thus the Price System remedy is to decrease supply, either through restricting production or destroying output, even though the restriction may be called recession, and the destruction war.

But a system operating in a fantasia smashes into trouble every so often. In fact, the Price System on the North American Continent, trying as it is to distribute scarcity in the middle of abundance, is smashing itself apart. You just can't work it. You can't drive through California by using a New Hampshire road map. Get the idea?

It's the same thing with the Price System in the middle of abundance. You can hang onto it, but the trouble is that the Price System road map is turning one way while the real road actually goes another. And the way the map shows, the way the Price System blindly goes, is right smash-over a cliff!

That's the thing we Technocrats see. And we think that when the Price System has the country tottering on the brink of disaster, we'll be able to show the people that they've been following a map that doesn't deal with the world as it is. And we'll have a map to offer them, a map that does fit the country we're traveling in.

We're not doing it because we're little plaster saints. If the Price System smashes everything, we go smash with it the same as everyone else. And if the new road is a lot smoother, why it's just as much smoother for us as for anyone else.

And besides that, there's the feeling of pioneering a world of abundance, the same urge that makes a fellow sacrifice to send his kids through college, the hope that the future will have more than the present.

Yes, to eternity we are nothing. In the diverse ranks of mankind, we are few. Yet we who know and work may do the simple task of throwing the switch that flashes on all the lights of a brighter world. Others have built it, and others will operate it. Yet to us, and on us, because we live these crucial events in this space and this time, devolves the responsibility for throwing the switch or condoning through our negligence and apathy the greater darkness that will descend.

For if we who have sighted the sun sink back to the slime, we shall sink far lower than the muck from which first we rose.

That's why I am a Technocrat!

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## *In Three Volumes*

'As for Marx and Engels, they were unable to foresee what would happen 40 years after their death.' (Prime Minister Joseph Stalin of the USSR in an interview with Harold E. Stassen at the Kremlin in Moscow, on April 9, 1947.)



# *E—MC<sup>2</sup>*

By Stuart Chase

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This article is reprinted from the *Survey Graphic* of May, 1946, with permission of the Twentieth Century Fund. It was taken from Stuart Chase's latest book entitled, "For This We Fought," published by the Twentieth Century Fund.

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**D**URING the war, scientists developed 2-4-D, for the extermination of weeds, DDT for insects, 1080 for rats, and  $E=MC^2$  for men.

Professor Einstein gave us the last in his theory of relativity forty years ago, but it remained for the Manhattan District project to demonstrate the complete reliability of the formula. 'E' stands for energy in kilowatt hours, 'M' for mass in kilograms. 'C' is the speed of light—186,000 miles a second—neatly verified again, as you know, by the 2.4 seconds it took to bounce a radar beam off the moon. The square of 'C' makes a very tidy sum.

When a chain reaction is set up in M, the resulting energy released becomes something which only the survivors of Hiroshima and Nagasaki can adequately report on. Furthermore, these chains were *not* carried all the way out per formula. The fission effect stopped relatively early. Already, it is said, atomic bombs have been produced which are one thousand times as destructive. Already, New York could be ripped apart from the Battery to Central Park in one shuddering cataclysm.

Or, put another way in terms of peacetime uses: By the ordinary burning of 2.2 pounds of coal we now get 8.5 kilowatt hours of energy. As Henry D. Smyth brings out in his 'Atomic Energy for Military Purposes' (Princeton University Press, 1945), the formula 'shows that one kilogram (2.2 pounds) of matter, if converted

entirely into energy, would give 25 billion kilowatt hours.' That is the equivalent of the entire electrical power consumption in the USA for two months in 1939.

So mankind reaches its third, and perhaps its last, great landmark. First came the discovery of fire, next the development of agriculture, now the release of atomic power—and after a million years on the planet the creature called man has either mastered his environment or caused it to destroy him.

Let us retrace our steps a bit—with the help of William Howells in his 'Mankind So Far' (Doubleday, 1944):

In the late Tertiary epoch (7,000,000 to 1,000,000 B.C.) anthropoid apes roamed over Asia, Europe and Africa, some of them rather man-like. One branch in Asia finally came down out of the trees and began walking erect. It had a big brain for an ape, and of course an opposed thumb with which to manipulate things, sticks, axes, someday cyclotrons.

## *Three Landmarks*

1. In the Lower Paleolithic epoch (1,000,000 to 50,000 B.C.) this creature invented fire (the first landmark) and progressed radically in the reduction of the weight of his skull and jaws. In due course, a race evolved not far different from the Australian bushmen of today. First axes, choppers, and other crude tools were made from flaked stone. Hunting was the



chief economic occupation. The brain case grew larger. Language probably developed along with the first tools. One needs to explain how to use a tool to one's fellows—a thing no ape can do.

The Upper Paleolithic (50,000 to 10,000 B.C.) brought a great advance in stone-working. Experts could strike off a long, fine flake from a core and out of it made knives, arrowheads, spear points, files, awls, scrapers, with which to work wood, skin and bone. Later came the dog and the bow and arrow; then canoes, netting, basketry. Modern Eskimos, where uncorrupted by the white man, live a life similar to the Upper Paleolithic. It was still a hunting and fishing culture, with a world population, Howells estimates, of not more than 10,000,000. That was about all the environment could support with the techniques then available.

2. The Neolithic Age (beginning around 10,000 B.C.) inaugurated the second great revolution in the history of *homo sapiens*. This was on the Persian Plateau, on the bridge between Asia and Europe from which have come the headlines of postwar clashes these months. Man discovered how to domesticate plants and animals. *For the first time a settled community became possible.* No longer was it necessary for nomadic families and clans to follow the migrations of wild animals for food. People could hoe a garden with a forked stick, milk a goat, and stay put. It is impossible to overemphasize the importance of this progression.

With the Bronze Age (about 5,000 B.C.) a pair of oxen yoked to a metal plow could so improve the efficiency of bread production, that a small percentage of mankind could be permanently released from the fields. Cities became possible. The first we know of was Harappa in India; then Ur and

Kish in Mesopotamia; Thebes, Karnak in Egypt; the cities of ancient Crete, and so to Troy, to Sparta, Corinth and Athens of the Greeks. With the cities came kings to rule over them, priests to pray for them, artisans and silversmiths who never laid hand to plow, markets, trade routes, galleys, prostitutes, pyramids, temples, tenements and slums—and most important of all, came writing, mathematics, and the concept of science.

By 1600 A.D., the population of the world had increased to perhaps 400 million, and Galileo laid down first principles for the machine age. By the time the atomic bomb was dropped in a New Mexico desert, population had increased fivefold to two billion. This growth was made possible by inanimate energy and the factory system, together with the control of communicable diseases. To go back now to the Paleolithic Age would cost the lives of perhaps ninety-five out of every one hundred living persons.

3. The destruction of Hiroshima on August 6, 1945, is the third great landmark in the history of mankind. The way now lies open to the pulverizing of all cities everywhere, as General Arnold demonstrates in his final report. The way also lies open to unprecedented increases in production, living standards, public health.

Howells does not believe that man will entirely destroy himself through cataclysm—but he wrote before the bomb. *Homo sapiens*, he says, is one of the toughest, most tenacious, most adaptable of all the animals. He is still largely unspecialized for a given environment—which is a great advantage, as compared with highly specialized animals like the giraffe or the ant eater. But even man could hardly adapt himself to perpetual explosions.

What the bomb does is to threaten



our cities and thus printing, science, the humanities. People would no longer have time to think. Atomic fission, unless it wipes out all land life, will not entirely destroy man; it will just pitch him back 100,000 years or so into the Paleolithic. As we have seen, it has been quite a haul up from there.

Sometimes one wonders if we ever went through this same cycle before and then crawled back and up.

### *To Make Us Aware*

The physical world has a certain structure. The physical scientists have now learned to understand it—not completely, but enough to tear the fundamental building blocks apart. They have done this by a vast project of planned cooperative research, covering five years and costing \$2,000,000,000.

On the other hand, the world's political and industrial leaders are not scientists; most of them never went beyond simple algebra. But it is of the utmost importance that they respect, and understand in a broad way, what the scientists have done. Otherwise we are led by men who do not know the shape of the world they are trying to lead or the forces now loose within it.

Not only must leaders exercise their brains to an unwonted degree, but they must exercise their imaginations. They have got to see the unearthly glare, feel the shattering crunch as energy is released in these magnitudes. That mushroom of cumulus smoke in the stratosphere must be ever before their eyes. They must see, hear, smell, feel—almost taste—a chain reaction; it should be etched forever in the nervous system.

If the bomb is considered as just another element in power politics, just another military weapon, only stronger, the Paleolithic Age surely awaits

us. Atomic fission simply is not that kind of event. Our leaders must come to see it in its true dimension, a blinding, shattering force, ranking with the discovery of fire and the discovery of agriculture. In such perspective they may be able to deal with it. Is there any way to give them such perspective?

### *Continuous Exhibit*

We never learn from words, speeches, books, by themselves. A human being must first experience light rays, sound waves, sensations striking his nervous system, before he can speak or think intelligently about the things to which the sensations refer. From such direct contact, his whole mental world is built up. After enough contacts, words and books can become meaningful.

Most scientists keep this direct contact, unlike the academic scholars. Many of the latter labor under a punishing handicap of abstract words unconnected with space-time events. The philosophies and the dialectics go round and round without hitting anything. The great strength of the scientists is that they admit their talk is meaningless, and their conclusions invalid, unless these *can pass the test of physical experiment*. If the results of the experiment are positive, the talk makes sense.

Galileo ended two thousand years of portico philosophy—where it was solemnly affirmed that heavy bodies would fall faster than light bodies—by dropping light and heavy bodies from the leaning tower of Pisa and timing the fall. He found they arrived together.

### *Why Not All Leaders?*

But why not carry the idea of firsthand experience much further? Why not expose *all* the outstanding leaders of the world to a direct chain reaction?



Let them stand there and watch. If a few get a little too near and are knocked over—like those extra-curious scientists in the New Mexico desert—that is all right, too. Protect them from lethal rays, but let them get knocked over. That is what they came for.

Furthermore, there should be regular exhibits, say every six months, in the Sahara, the Gobi, Death Valley, and other arid areas of the world. We never knew quite what to do with deserts before. Now we do.

Many of our leaders have had legal training. Thomas Reed Powell, of the Harvard Law School, once observed: 'If you think that you can think about a thing, firmly attached to something else, without thinking of the thing it is attached to, then you have a legal mind.' One would feel safer if all leaders had to pass an examination in simple mathematics, in distinguishing clearly between a fact and a generalization, in the scientific attitude—and so could avoid the verbal habit of proceeding from an unwarranted assumption to a foregone conclusion.

If it turns out too much to ask a congressman to demonstrate his ability to move logically from cause to effect, then we had better draw our congressman from a different panel. A politician is *not* a scientist, and no one should ask him to be, at least until the social sciences have developed much further. But, in the atomic age, the politician should be acquainted with the scientific method, and should know which way the scientists are steering the human race. He should realize that cause-and-effect relationships exist also in human affairs, and that no real control is possible without understanding them.

### *The Rank and File of Us*

For those of us who are not top leaders, for the rank and file of literate humanity, the schools and press

should place far more emphasis on mathematics, logic, semantics, straight thinking, and the scientific attitude.

How many of us can state clearly what constitutes a controlled experiment? Small children begin by thinking pretty straight, because of their firsthand experience with a bumpy world. Later they are deluged with high order abstractions, and their pristine approach to the laws of cause and effect is corrupted.

All of us, furthermore, should see such moving pictures or stills of Hiroshima and Nagasaki as are available, from either American or Japanese sources. We should see the dead, the wounded, the smashed hospitals, the agony. These should be run in every theater in the world at regular intervals, without soft music, without announcers who coat their vocal chords with honey. We should take these horrors straight, hard and unvarnished. If anybody faints, that is all right too.

Movies are not as good as seeing the real thing, but they get into the nervous system after a fashion, and leave a sharper imprint, for most people, than words can ever do. Thomas A. Edison used to say the shortest route to the intelligence runs over the optic nerve.

All theaters should also show documentaries of the navy tests, the Sahara; of all future chain reactions in bombs. We can't all be leaders and be there in person; but on the screen the rest of us can be present at one remove—seeing and hearing, but not quite feeling, the total event.

Then there should be frequent documentaries of the development of atomic energy, with moving diagrams tracing the principles involved, so far as they can be simplified. We should see the uranium mines, the piles, the shields, the new power units. We should be taught what inspection means.



Moreover, we should see medical diagnosis by virtue of the new rays, cancer research, heat therapy—all the good and cheerful aspects of nuclear fission.

### *Running Away vs Facing Up*

Talk, editorials, columns, dissertations like the one I am writing, are not going to help much. The words are already wearing out. We must constantly be shocked into awareness—as when lightning strikes close by. Only firsthand experience or its equivalent can hold us to the task of saving our civilization.

If the social scientists can refine and sharpen this approach, the world will be profoundly grateful. But they can do more than that. They can help our legislators draft the machinery to control the bomb. They can help break up the unfounded notion that man has an instinct for war. He has a pugnacious instinct, which is very different, as Julian Huxley has amply demonstrated. War is a cold-blooded business of organization. Look at the Pentagon building.

Marjorie Laurence Street in *The Ladies' Home Journal* for February analyzed the ways in which many people are beginning to escape from this discipline of reckoning in an impractical fashion with a supreme discovery. To telescope her list:

*'Let's not talk about it.'*

*'The higher-ups will solve it.'*

*'A defense will be found; it always has.'*

*'They won't dare use it.'*

*'The USA can stay ahead of all enemies.'*

*'Anyway, we're keeping it secret.'*

*'We've never lost a war.'*

*'We all have to die sometime.'*

*'You can't change human nature.'*

*'I'll be dead by then.'*

*'We ought to bottle up those scientists.'*

The idea that I advocate is to shut off these infantile escapes, and try to look our destiny in the face.

### *For This We Fought*

Sooner or later this moment had to come. It has been inevitable since mankind came down out of trees and shaped the first axe. *Homo sapiens* is the kind of animal which was bound to be curious about the structure of the world around him. Now he has found the answer, or a large part of it.

Has he found it too soon? That is a meaningless question. Nobody knows, or can know, whether it is too soon, until the proposition has been demonstrated. If a handful of us wake up some stormy morning to find ourselves in the Lower Paleolithic, we can conclude it was too soon.

Until then, it is our duty to try and meet the challenge.

If enough of us can become aware of what has happened, our generation should not have too much difficulty in devising a piece of international machinery adequate to contain Einstein's equation. There will be stiff problems of inspection of uranium and perhaps thorium deposits; also graphite, beryllium, heavy water; centrifugal blowers to keep track of, electromagnets and large power installations for the conversion of plutonium. These are all secondary matters, however. The physical scientists, who are showing the most gratifying terror of what they have done, can be trusted to handle such details. Technically, these do not compare in difficulty with the Manhattan project.

The real problem is to get the rest of us as intelligently alarmed as the scientists. Then we will push and push—and an appropriate solution will be found . . .

Then our young men will not have fought and died in vain.



# Where Is My Boy Tonight?

Current Legend, 2700 A.D.

By Sam Pavlovic, R.D. 9344

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Humpty Dumpty sat on a wall,  
Humpty Dumpty had a great fall;  
All the King's horses and all the King's men  
Couldn't put Humpty Dumpty together again.

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It seems back in the dark ages of about 1948, strange phenomena occurred throughout the land. The Hewers of Wood and Drawers of Water suddenly turned into statues of stone. At the same instant all of the Real Thinkers of the land disappeared mysteriously into the side of a mountain.

Now, the Money Changers, the Politicians, the Medicine Men, of the Higher Temples and their Retinue viewed this in great alarm. After their initial pangs of panic abated and the realization came that they had been spared, they summoned a conference. Their first decision from long habit was to try to get the Hewers of Wood and Drawers of Water back to a normal physical condition. All of their subsequent chanting and ranting was to no avail. The statues remained statues. (Stone is very unemotional. Some silly scenes must have occurred here.)

Now, one of the more imaginative of the Medicine Men suddenly came forth with a completely new and revolutionary thought. (They say that the complete strangeness of this effort prostrated the fellow.) He reasoned that the Real Thinkers were the boys to solve this problem. (This was pretty fair reasoning, insofar as the Real Thinkers were the only ones who had ever solved any problems down through the centuries.)

When the logic of this soaked in,

the Money Changers, Politicians, Medicine Men and their Retinue hot-footed for the mountain in the hope of succor. All their ensuing efforts were in vain. Prodigious pleadings and probings failed even to bring forth a hint of the Real Thinkers.

These gentlemen of the Status Quo now came to the realization that they were on their own. The subject of social reorganization was delicately avoided as the hottest of hot potatoes. Furthermore, they were well aware that an ascent to the status of Real Thinking was a biologic impossibility for them. Pompous pride of pampered principle forbade any social descent. Even though the Carriers and Hewers in reality had merely been lever-lifters and custodians of the mechanical slaves, their tasks represented an insurmountable barrier to untraineed minds and unwilling backs. The Medicine Men at this point cast significant glances at their Retinue who, in turn, after some oblique, nervous glancing of their own, slunk away at the first opportunity a la jakal style.

Now, in a very short time, this social disarrangement began to bear fruit. Values suddenly turned upside down. Here are just a few examples. A ticker-tape salad garnished with shredded one-thousand dollar bank notes had no more vitamin value than one garnished with dollar bills. Gilt-edged bonds and first mortgages were found to be quite inadequate in stop-



ping leaky roofs. Beef boullion superseded gold bullion. (Ah, the proper biologic chronology was shaping up.) Law books and texts on philosophy were found to be poor building blocks. And, of course, the platforms of political promises couldn't even provide good kindling wood, much less support anything.

Misery loves company, so the saying goes, but not in this instance. The Money Changers and Medicine Men fled from the company of the Politicians. (It sure is tough when there is no audience.) The Money Changers had nothing to sell, and nobody to fleece. From force of habit a goodly number of them spent their time counting their useless debt tokens. The more sardonic type amused them-

selves by throwing hard money at the stone statues.

The element known as hard-headed business men had the opportunity to make use of their peculiar talent. They hiked back to the mountains in the hope of bringing forth the Real Thinkers. Time and again they charged the mountain, a la billy goat, but it stood fast, and brought forth nothing. The Medicine Men simply had nothing to do, and wandered in and out among the stone statues with a vacant stare. Some of the more talented were observed counting the number of statues. In the meantime, the only intelligent utterance came from a Politician, who immortalized himself by saying, 'Brother, this is really Hell!'

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## ***Pass the Murphies, Please***

Before the war the average consumption of potatoes was 131 pounds per capita. During the year ended June 30, 1946 this dropped to 127 pounds per capita. The potato crop in 1946 was a whopper, about 500,000,000 bushels. There was a 100,000,000 bushel 'surplus.' Every device in the book was used to get rid of the 'surplus,' including dumping out on the ground to rot. One might ask why the sanctified 'law of supply and demand' didn't operate in this case and lower the price of potatoes. If it had been allowed to operate just a teeny weeny bit so as to raise the per capita consumption by 4 pounds to get it back to the prewar level that would have consumed 568,000,000 pounds of potatoes. That would have made an awful hole in the 'surplus.' But, no, that's not how the Price System operates these days. The government now supports the price. It paid \$2.20 a hundred pounds for the 100,000,000 bushel 'surplus' so that John Farmer would not suffer economic loss. Recently the agricultural department offered to sell 'sur-

plus' potatoes for commercial export at 5c per hundred pounds. So far, it has managed to get rid of only 5,000,000 bushels. The prospects are for a bumper crop again in 1947. If conditions are favorable there will also be a bumper crop in 1948. Reason? The Steagall amendment which guarantees 90 percent of parity price to farmers runs until December 31, 1948. John Farmer will never pass up a good thing like that.

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'The problem of commodity surpluses again is confronting the world. Some are already here. Others are on the horizon. They are already giving serious concern to government planners in many countries. Reason for this concern is that, in the past surpluses of such major commodities as wheat, wool and rubber have led to unemployment and financial disaster for millions of people in many countries. Crude attempts to prevent such surpluses have sometimes led to monopoly, high prices and trade restrictions.' (World Report, May 13, 1947.)



# Old Concepts or New Designs

Hitch Your Wagon to a Rising Star

By F. C. Glenn, R.D. 8931

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'How free are we today—from war, pestilence, earthquake, volcano, fire, sickness, idiocy, imbecility, pauperism, crime, squalor, shipwreck, stupidity, ignorance, superstition, famine, disease; from accidents of mines, factories, railroads, automobiles and airplanes; from harsh sounds, bad air, and foul odors; from scorn, malice and intolerance; from vested interests and established opinion in church, school, and government in home, society and nation; from clocks, timetables and calendars; from the decrees of fashion, the convictions of the mob, the mandates of the politicians? In short, how free are we of the ox goad and the treadmill? . . .

'Why is man not as free as he might be? Because his mind is made up; his pride of opinion outweighs his desire to know; he dismisses realities with a "God's in His Heaven—All's right with the world," and neglects the first lesson he ever learned—which is, that he can learn. Because he refuses the dare thrown to him by nature herself: Know thyself; and refuses to heed the warning written across every page of history and strewn across the face of the earth itself: . . .

'The human being that can learn no more has parted with the only priceless possession in human inheritance. The men, women, or nations that harden in their mold, get set in their ways, crystallize their opinions and beliefs, and swear by and live according to their routine habits—such men, women or nations are old; senile decay is at hand.' (George A. Dorsey, anthropologist, in his book 'Why We Behave Like Human Beings.')

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## *Low Road or High Road?*

In this viciously competitive Price System, which has developed crime, debt, malnutrition, insecurity, poverty, ignorance, and internal strife, the factors which in the end reap disintegration, there is a fundamental battle between hand tool scarcity and machine tool mass production; between the science of today and the obsolescent concepts of the dead past; between the change of tomorrow and the status quo of yesterday. To survive in tomorrow's change man must learn to think in broad new terms, by measurements hitherto beyond the reach of his conceptions.

Where man finds no answer, he will find fear. Where he finds no answer, he becomes an escapist, running from the figments of his own brain, afraid of the synthetic fears concocted

in his own imagination. He shirks his responsibilities, travels the way of senseless vagaries of emotional stupidity, arrives at a dead end and finds no way out.

Traveling the way they feel about things, such emotionally misdirected individuals feel insecure and are not well adjusted to life. Such persons fear and hate most readily and try to offset their fears with hopes, arguments, rhetoric and fancy ornamentation. Fear, hate, and hopes are the ingredients for the sterility of defeat and have the qualities for breeding suspicion, perplexity, and mistrust. It is here that man should halt, giving himself the severest scrutiny, and endeavor to remove his own greatest obstacle in achieving the answer.

After removing the emotional approach, mental hazards, the self sufficiency of egotism, false claims, and



false criterions, along with the sublimation of self adulation, the answer can be found through accurate observations, precision measurements, and scientific investigation. It cannot be found according to this wish or that wish! It does not operate this way or that way because the way we feel induces us to want it that way, but because the job to be done determines the way it must be done. When things are brought together in proper relationship, the principle automatically attaches itself.

### *Let the Facts Decide*

Recognition of the facts, and awareness of facts alone, makes it possible to arrive at the answer. Any moronic approach leads to confusion and futility. There must be harmonious conformity in the requirements of the job, for the measurements brook no opposition. The answer is exact, inflexible, adamant, and lies in the physical relationships. The changelessness of physical laws dictate that principle shall constructively reside where the relations are harmonious. The same laws decree that principle destructively rebels and shall not serve incorrect relationships.

The accomplishments of the scientist and all human progress, in addition, depend upon accurate measurements, correct calculation, directed effort, and his ability to understand and

measure the forces and materials he is dealing with. When he has learned what to expect from his observations of previous performances and inherent characteristics of the forces and materials, then he is ready to proceed; and from there on out, he can predict with reasonable certainty what these forces and materials will do under certain conditions.

All disputes recede into the background where the answer automatically exhibits itself in the agreements among investigations conducted by men. The wishful thinking individual may well consider that it is only the moron who will accept dictation from another moron, the end product being futility. Whatever our future is to become, it must proceed from what we have here and now, not what we wish we had. You may cry back to nature all you please, but the scientist answers 'forward to laboratory and the machine,' the way to security and abundance for all.

Technocracy has the knowledge, the organization, the Continental design. The rest is up to you—the American people!

Have you the capacity and the courage?

Nature says 'Know thyself.' Technocracy supplements by saying 'Know Your America!'

Investigate the Facts! And Join Technocracy Now!

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## *Off With the Old Love*

'Evolution of our civilization has only progressed by constantly discarding the old for the new, no matter how temporarily painful or injurious to the existing generation. The overall welfare of society must always transcend that of fragmentary groups, and it would hasten

the world's progress if each generation would consider the welfare of those to follow.' (A. B. Sparboe, President Overseas Division, Pillsbury Mills, Inc., in a talk before the Chicago World Trade Conference, February 17, 1947.) As quoted in *Commerce* magazine, March, 1947.



# *Footprints in the Sand*

Report On A Celestial Interview

By Bill Raby, 8741-1

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All quoted material in the following interview is direct quotation from published material of the two persons involved.

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The crinkly-eyed man with the sloppy brown VanDyke beard perched easily on the cloud. The sheaf of paper in his hand was blank, and his pencil was sharp. But he didn't doodle. He just sat quietly, patiently watching the shadowy outline of a door which hung motionless in the otherwise empty sky.

Gradually, a shape formed in the doorway. At first, it was only a vaporous hint. The bearded man on the cloud pushed back the stringy hair which persistently fell over his eyes, and peered interestedly as the shape in the doorway took substance.

Tall, and looking even taller because of his thinness, the slightly slumped figure in the doorway weakly smiled. Wispy white hair, and skin of almost parchment texture, told of having lived to great age, while the well-fitting brown business suit spoke of a properous life.

The man on the cloud stroked his bushy moustache, and spoke words—comforting words, spoken slowly, painstakingly, with a steady tempo accentuating the slight Scandinavian drawl. He said that Henry Ford had been a great man, an admirable man, and he was welcome to this place, this one stage in a longer journey. Then he rubbed his lightly flattened nose with the side of the pencil, and with a half-visible cynical smile asked if Henry Ford would say a few words

on what he thought of the world he had just left—just a few words for the Eternal Record.

Though he slumped where he stood, when the thin man in the doorway spoke, his voice was incisive. 'We are in the great age of transition from the drudgery of life to the enjoyment of life.'

The man on the cloud derisively smiled. As he scratched words onto the paper, he slowly muttered: 'The democratic nations have taken over in bulk the whole job-lot of vested interests and divine rights that have made the monarch of the old order an unfailing source of outrage and desolation. The same items will foot up to the same sum.'

The thin man nodded disagreement. 'Today we already have enough tested ideas which, put into practice, would take the world out of its sloughs and banish poverty. The economic basis of prosperity is always present. But men must be led into prosperity.'

The man on the cloud smiled tolerantly. As he wrote, he seemed to weigh the words of the other. 'Men led into prosperity? In the last analysis it is the frame of mind of the common man that makes the foundation of society in the modern world.'

The man in the doorway hesitated, as if unsure of his next words or unwilling to say them. 'Labor works along under any system,' he finally said reluctantly. 'But industry must have generalship—and of a high order. Most of the so-called "economic" problems would be completely solved if industries were managed by men who know industry.'



The man on the cloud nodded agreement. As his sharp pencil raced across the page, he observed: 'Under ordinary conditions of businesslike management, production is one-fourth of the industrial community's productive capacity.'

The figure in the doorway sadly agreed. 'A business cannot serve both the public and the money power,' he added. 'Money is not business. Money has nothing to do with the quality of the article which is manufactured, nothing to do with the output. Industry is not money—it is made up of ideas, labor, and management, and the natural expression of these is not dividends, but utility, quality, and availability.'

The man on the cloud smiled too gently. 'Under corporate management it rarely happens that production is pushed to the limit of capacity,' he reminded again.

Henry Ford straightened, and his face took on a deep sternness. 'Industry exists to make things that people use.'

The man on the cloud chuckled. 'The business men have always turned the technologists and their knowledge to account only so far as would serve their own commercial profit, not to the extent of their ability; or to the limit set by the material circumstances; or by the needs of the country.'

Henry Ford nodded reluctant agreement. 'The real meaning of power and machinery is that it was brought into this world to free man, not to enslave him. There is a new morality. Morality is doing the sound thing in the best way.'

While he continued writing, the man on the cloud mused aloud: 'With the continued growth of specialization the experts have necessarily had more and more to say in the affairs of in-

dustry; but always their findings as to what work is to be done and what ways and means are to be employed in production have had to wait on the findings of the business managers as to what will be expedient for commercial gain.'

Eagerly again, Henry Ford spoke: 'The old idea of business, that it consists of one man getting the better of another man, is no longer acknowledged as businesslike even by those who practice it. A great modern industry progresses by the unified thought and energy of many men. There is a cooperation based on common interest in the job to be done.' As if the exertion of speaking had tired him, he slumped against the doorway. His wispy white hair shifted gently as he dazedly shook his head.

The bearded man on the cloud laid his notepaper down. 'A great modern industry progresses by the unified thought and energy of many men,' he repeated approvingly. 'If the country's productive industry were completely organized as a systematic whole, and were then managed by competent technicians with an eye single to maximum production; the resulting output of goods and services would doubtless exceed the current output by several hundred per cent.'

Slumped in the doorway, Henry Ford started to fade, to pass further on into the nothingness of eternity. 'The old tricks have failed,' he sadly admitted. 'The old wisdom has proved foolishness. The old motives are ineffective. When the function of any industry is to produce dividends rather than goods for use, the emphasis is fundamentally wrong.' Practically one with the transparency of the empty sky, his voice sounded hollowly from the now empty space in the doorway: 'Engineering science is the enemy of shortsighted finance.'

The figure on the cloud slowly



tucked his note paper into the pocket of his grey suit. As it completing the train of thought, he drawled mumbly, in that Scandinavian mutter of his: 'The technology requires the use of trained and instructed workmen, and a corps of highly trained and specially gifted experts. Born, bred, and trained at the cost of the community at large, they draw their special requisite knowledge from the community's joint stock of accumulated experience.' He paused, and returned the pencil to his vest pocket. 'The material welfare of the community is unreservedly bound up with the due working of this industrial system, and therefore with its unreserved control by the engineers, who alone are competent to manage it. To do their work as it should be done these men of the industrial general staff must have a free hand, unhampered by commercial considerations and reservations; for the production of the goods and services needed by the community they neither need nor are they

in any degree benefited by any supervision or interference from the side of the owners.'

Then Thorstein Veblen strolled slowly through space to the doorway hanging motionless in the emptiness. The man who Henry Wallace said 'more than any other economist in his day saw the inevitability of many of the things that are now happening . . . (and . . . planted many seeds which will inevitably have a profound effect on the future of the nation' strolled through the open doorway. He, of whom Ernest Sutherland Bates said, 'out of an entire generation of political and economic thinkers, he alone produced a body of thought that lives on,' faded into nothingness.

Thorsten Veblen, former editor (albeit of an economic journal), had an interview to write up. Henry Ford had been an important man, and his measured opinions would be of great interest to the celestial audience.

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## Operation Americana

Senator Albert W. Hawkes (Rep. N. J.) recently pointed out in a talk in the U. S. Senate that a handful of people have controlled the U. S. Government all down through its history. The nation was established 171 years ago. The population is now 142,000,000. During the intervening years since 1776 other millions have lived and died. The percentage of this vast host that have controlled the Federal government has been infinitesimal.

There have been about 10,000 representatives in Congress, 8,500 in the House, and about 1,500 in the Senate. There have been 32 Presidents, 70 justices of the Supreme Court and only 12 Chief Justices. Said Senator Hawkes: 'The astounding figures I have quoted

should impress us with the responsibility that rests on our shoulders.' (*Labor*, April 26, 1947.)

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'I have figured out that, judging from the amount of furniture brought over in the Mayflower, the boat was slightly more than five miles long.' (W. C. Fields in the *American Freeman*, January, 1947.)

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'In the early history of the world it was thought to be flat, then it was found to be round, but now we'll be darned if it isn't crooked.' (*Progressive World*, March, 1947.)





Photo: Mammoth Tree Shears Co.

The old way of falling trees was mostly muscle and a little head work. With the new way you have very little muscle but a lot of technology. The tree shears shown will cut down trees up to 24" diameter at the rate of 5 per minute. Leverage for cutting comes from push of tractor against tree. All factors must be tested and added correctly. That's the only way technology will work.





Beaumont  
Clark

Photo: SKF Industries Inc.

The first electric motor ever made. Thomas Davenport, Vermont blacksmith, went to town one day in 1833 and saw one of the first electric magnets. He bought one, thinking he could use it to propel machinery. In building a larger model he ran out of silk for winding. His wife came in with her wedding dress. So the story goes, Davenport, unsung hero of technology, deserves a good story.



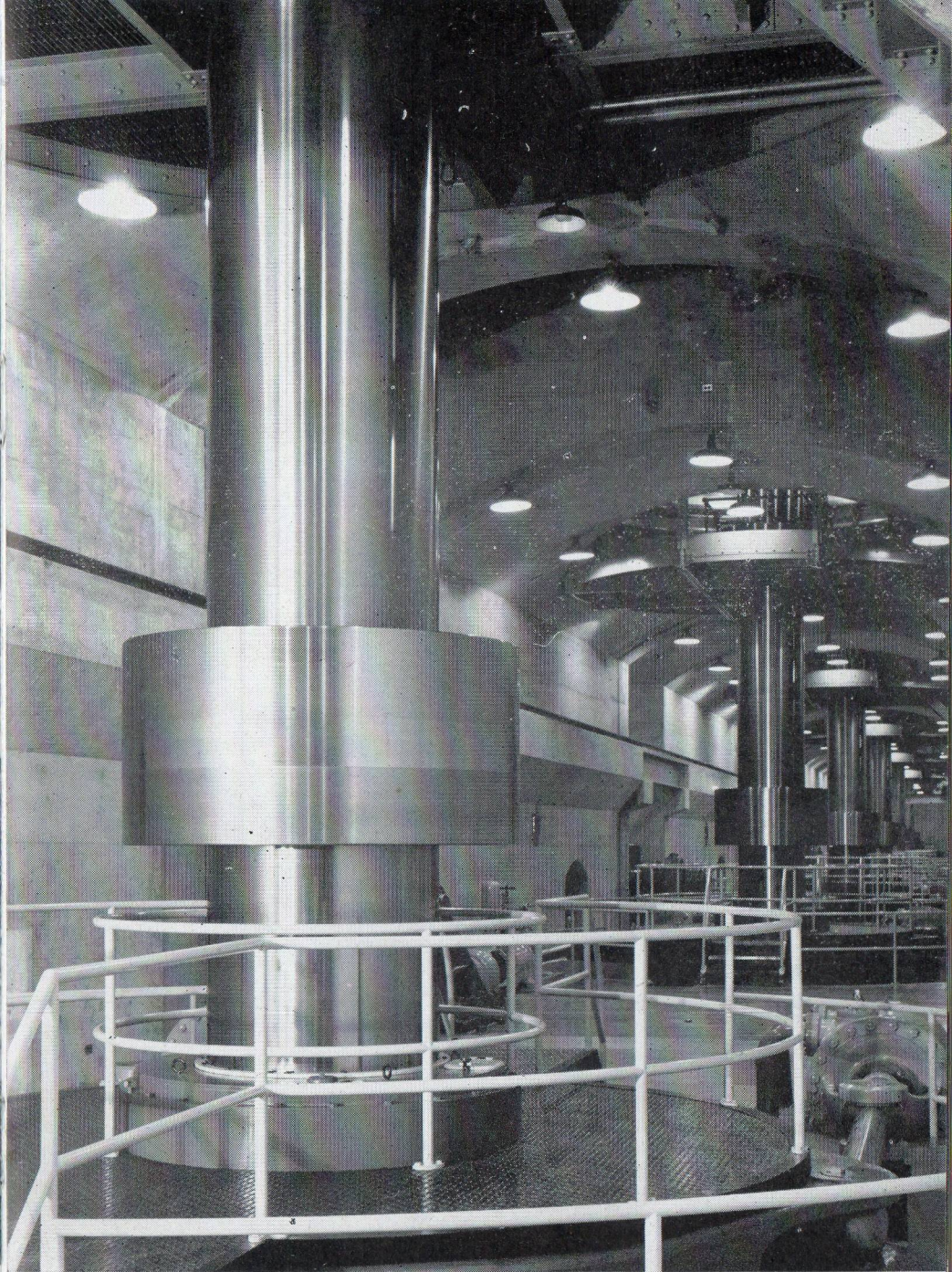


Photo: Bureau of Reclamation

It's a long way from Davenport's home made motor to these monstrous steel turbine shafts turning overhead generator's at 'Hoover' Dam Power House. This is a real story and it happened in the space of one long lifetime. Beliefs made no social changes in 7,000 years. Science did, in a short





Photo: Goodyear Aircraft Corporation

Here is a giant wheel for the XB36 Army bomber. The tire that goes around it is over 9' high. Total wheel, brake, and tire assembly weighs 2 tons. The small wheel the young lady holds with brake and tire assembly, weighs 15 lbs. Big or little, it's all the same to technology. Science invades every field except that of social problems. But, it won't be long now. It better not be.



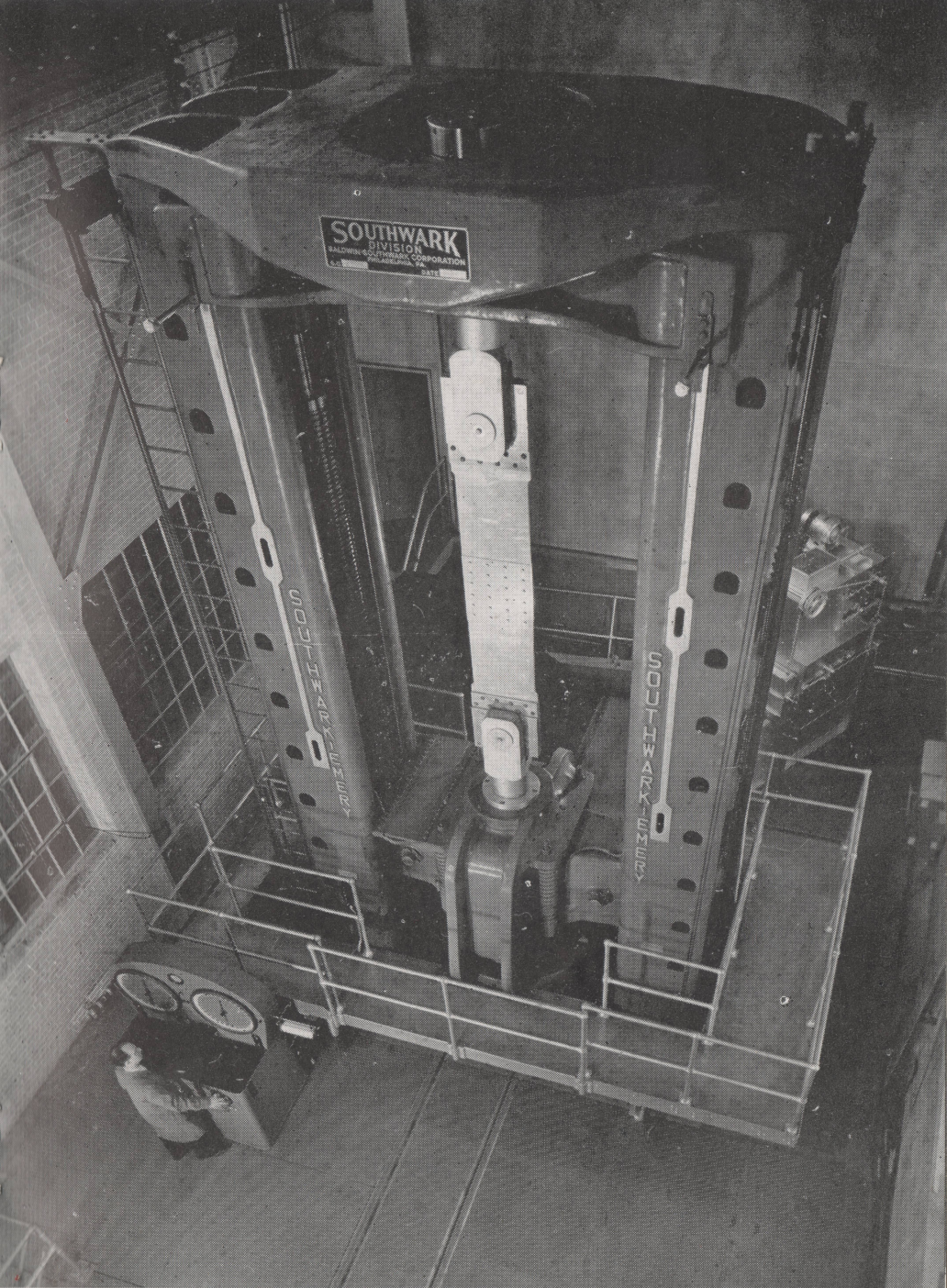


Photo: Aluminum Company of America

Here's a precision testing machine with a force of 3,000,000 lbs. The force can be controlled with an accuracy of one half of one percent. Unit stands 5 stories high. It's used for testing metals. That's how technology works; test everything and add the factors correctly. If we test the Price System and add up the factors we find that it stinks bad enough to collapse anytime now.



billy,' really made the discovery several years ahead of Bessemer.

In his plant near Eddyville, Kentucky, about 1846, says L. W. Spring, Kelly invented a process for making large sugar-boiling kettles for the Southern planters, and in seeking to make better and cheaper wrought iron for his kettles, he discovered the same process as Bessemer—that a steady blast of air alone would refine iron and convert it into steel. Ironmakers laughed at the idea, Kelly's father-in-law threatened to withdraw money from his ironworks, and his customers, hearing that he had a "new-fangled way of refining iron" insisted that they wanted iron in the regular way or not at all. Then the ore supplies near his ironworks gave out. Despite these difficulties, he worked on his process in secret, built a converter in 1851 at the Cambria Iron Works, in Johnstown, Pennsylvania, and hearing of Bessemer's process, patented his converter in 1857. Some authorities give Kelly credit for being the first inventor in this field.

Nor did Bessemer meet with smooth sailing in the introduction of his new process. Iron makers who first tried his method failed to get expected results. The steel they produced was brittle. Lacking scientific knowledge, these manufacturers were helpless in determining the cause, and rejected Bessemer's invention. So Bessemer set out to prove that he was right. He found that the iron he used in his experiments had a low phosphorous content. That produced good steel. The iron used by his customers had a high content of phosphorous, which accounted for the brittleness of the steel product. Having thus discovered the cause and the remedy, Bessemer found himself still unable to interest the manufacturers in his process, until after he had built himself a plant and demonstrated his method beyond a

doubt. Eventually the process came into general use throughout the industrial world, only to be superseded in large part by the open hearth method of a later date.

It is unnecessary here to give a description of the Bessemer-Kelly process. Our readers are urged to get a copy of L. W. Spring's 'Story of Iron and Steel' and read the dramatic account of how Bessemer made the discovery in 1856. Spring closes his story with this observation:

Bessemer was the father of the steel age. Without him there might be no transcontinental railroads, no skyscrapers, no great bridges, ocean liners, or Panama Canal. In the development of the industrial world as we know it today, he stands next to Watt, the inventor of the steam-engine.

Meanwhile, at this point in American history, the several streams of technological development begin to converge into one mighty river. The individual achievement becomes less noticeable in the larger current; the individual inventor or technologist is about to become a mere attache of the entrepreneur, who in turn is about to lose his character of 'rugged individualist' and to become a mere cog in the giant corporation and holding company of the twentieth century. Technology marches on the double quick!

Before we pass on to the Power Age, let us tarry awhile longer in the early Machine Age and view some more outpourings of the smaller streams of technological development in America. My next 'Flash' will treat of the subject, 'An American Introduces the Sewing Machine.'

#### Reference:

Waldemar Kaempffert, 'A Popular History of American Invention,' Volume II, Chapter I: 'The Story of Iron and Steel,' by L. W. Spring.



# Primer of Technocracy

Culmination of The Industrial Revolution

By Henry Elsner, Jr., R.D. 8342

## 'When In The Course'

The Industrial Revolution formed the cornerstone of modern society. If the events precipitating it had not occurred, we would today be without most of the conveniences and necessities which we take for granted. Life would have remained at the static level of thousands of years ago. But while this Industrial Revolution has brought material benefits hitherto unimagined of, it has also introduced a disquieting note into our social life, which, as the years have gone by, has risen in crescendo. The last great depression and World War II were but two of the more obvious products of the factors which are 'upsetting the applecart' of our living and thinking.

In determining the causes and analyzing the effects of these conditions, we will deal primarily with the North American Continent. This is because we live here and are naturally more concerned with problems close at home, and also because certain physical factors have put America in the forefront of social change. The foremost of these factors is the fact that the North American Continent has approximately 54 percent of the world's total known energy and mineral resources. We have 19 percent of the world's land area, with only 9 percent of the total population. Europe and Asia, due to the natural scarcity of many of the resources upon which modern technology depends, plus a larger population than may readily be supported, obviously could not, in the same period of time, reach the same state of technical progress as that of North America. The Indus-

trial Revolution is here at the point of culmination. Kilowatt hours have replaced man-hours of labor as nowhere else in the world. Today only about 2 percent of our labor is manual, the other 98 percent being mechanical. Conversion of energy is at such a level that every man, woman and child has the equivalent of several dozen slaves working for him day and night.

These are some of the physical changes which the transition from hand-tool to power production has wrought. What are the changes in our society? A study of our economic and administrative systems will reveal that they are essentially the same as those in effect before the Industrial Revolution. Oh, yes, the outward appearances have changed, the ideologies have changed, and the groups in power have changed; but if one makes an honest analysis of *operating characteristics*, he will find that they have changed little. Our whole social system has been built on an economy of scarcity. All of the 'different' political and economic systems from 'capitalism' to 'communism' had their origin in the days before the Industrial Revolution, or when it was in its early stages. Power production and modern technology have, for the first time in human history, made possible an economy of abundance here in North America. It is obvious that there must come an inevitable conflict between these diametrically opposed conditions.

## *Physical History of America*

It has been said that statistics are dry, which is correct, but these same



statistics can be illustrated in the form of graphs, which sharply reveal important trends. If we take the statistics of the growth and operation of our industries since the country's founding, plot graphs from them, and then combine these graphs, we have a concise picture of American Industrial operations. A study of such a graph shows some very important trends. First, it is seen that the rate of extraneous energy conversion is constantly increasing. We see that total production has also increased proportionally. Another curve, representing man-hours per unit, that is, the length of time and number of men required to make a unit of anything, has declined. The line representing total employment rises until a peak is reached about the year 1921, and then steadily declines until the beginning of the Second World War. If we take the curves of extraneous energy conversion and production, and instead of the average curve used to compute totals, use one conforming strictly to periodic conditions, a very interesting state of affairs may be noted. Production zooms upward for a time, and then dips sharply, only to once more climb higher than before; which, in turn, is followed by another low dip. Each of these dips from the average curve is about 30 percent greater than the one previous, with each dip occurring closer to the next one than the preceding one was to itself.

What does this array of facts and figures mean in relation to our society? From the purely physical standpoint, this means that we have a growing capacity for the production of an abundance, and that less time and human labor is needed in this production—which should create more leisure time. Couple this with the production of plenty for all, and it would seem that the outlook is rosy

indeed. But here is where our economic system, which, as previously mentioned, was originated in conditions of natural scarcity, enters the picture. We have noted the dips in the curve of total operation. What caused them?

### *Expand or Die*

As industrial plant capacity rapidly expanded, a point was reached when consumption no longer equaled production. Then the shops closed down. The reasons for this are many, but one of the chief causes is that the markets became 'flooded'—too much was produced for the men producing it to buy it back. Added to this is the factor of decreasing man-hours per unit, brought about by improved methods, and increasing mechanization, which, under our economic setup, means unemployment.

In the past, these shutdowns were only temporary, as there were then several ways of alleviating their causes. One of the chief of these was further expansion. The industries opened new branches 'out west' employing more men, or new industries were started, putting more money into circulation. Or exports to foreign countries were increased. But, as the magnitude of operations increased, these shutdowns became progressively more severe, and closer together. Our frontiers were eventually closed, and the limit to new industries was becoming apparent. Also, improvements in existing industries meant only the shutdown of the more obsolete factories.

Thus did the debacle known as 'the great depression' occur. After World War I, business was stimulated by the scarcity rising from war-time conditions, and after a minor shutdown in 1921, such furious expansion was started that it was evident years before the crash that the limits must soon be reached. The



stock market crash was due largely to much greater expansion on paper (stocks and bonds) than could be accomplished in reality. When the limit was reached, everything started to collapse at once. When a depression is started, it becomes a downward spiral, increasing constantly in momentum. Millions were unemployed and needy in the midst of abundance.

With the New Deal, the last desperate measure to preserve and revive the distribution system were tried. 'Pump priming' through the NRA, government subsidies, public works projects, and the dole, was an attempt to redistribute the purchasing power so that goods might be bought and production once again commenced. At best, the plan was only a palliative, and not a cure. The 'recession' of 1937-38 bore this out. Production had risen to the 1929 level, yet there were still millions unemployed.

It took another war to finally lift America out of the depression. In wartime, everyone is employed producing war materiel which is destroyed, thus maintaining a perpetual scarcity. During this time, adequate civilian goods are not produced, which also creates a scarcity. It is this scarcity which enables our present full employment to be maintained.

### *Just Around The Corner*

The war is over now, and we are striving to return to 'normal.' We observe about us shortages, inflation, strikes and confusion in general. These conditions are not signs of a healthy economy. Many observers foresee another depression in the near future. The recent, and still continuing, events in the stock market seem to bear this out. When one studies the signposts of today, he is able to see that it is only a matter of time before another 'boom and bust'—or will we have a bust before a boom!

The problem facing us today is primarily one of distribution. The problem of producing an abundance for everyone has already been conquered. The paradox of 'poverty in the midst of plenty' is not insoluble. Surely we who have solved the problem with which the rest of the world is still struggling are able to accomplish this, solution of the problem of distribution.

The next depression will be the last depression! This economic and social system is doomed to go, not because it is so desired by a group or groups of people, but because it is outmoded. The change-over from an economy of scarcity to one of abundance will require changing a lot of ideologies ingrained for the past few centuries. This is not as hard as it seems, for did we not discard the horse and buggy in favor of the automobile? Whether we like it or not, we must face the fact that we must institute a new system of distribution and administration which is in accord with the technical age in which we live. The only alternative is to plunge North America into Dark Ages blacker than those Europe has ever known.

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### *Straw in the Wind*

Dun and Bradstreet reports that the number of business failures which was at a record low during the war has been rising steadily. 'Manufacturing failures outnumbered wholesaling and retailing failures in 1946 the first time in American business history and the trend has continued into 1947. In January and February 159 insolvencies were reported.' *Chicago Tribune*, May 4, 1947.)

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'The steel industry uses two billion gallons of fuel oil annually to heat its furnaces.' (*Steel Facts*, February, 1947.)



# Technology Marches On

Productivity Changes Since 1939

## Part 2

By Research Division, 8741-1

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In the first part of this article, published in the May-June issue, the increase in productivity in manufacturing between 1939-1945 was outlined. This part deals with the nonmanufacturing industries such as mining, railroad transportation, electric utilities and agriculture. All of the data cited are taken from the MONTHLY LABOR REVIEW for December 1946, unless otherwise indicated.

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### *Productivity in nonmanufacturing*

Wartime restriction on new equipment installations and shortages of materials and manpower had their effect to a greater or lesser extent in all industries. This condition aggravated operating problems and tended to slow down the steady increase in productivity.

This was especially true in those industries producing goods and services not directly essential to the war effort. For instance, in the clay construction products industry production dropped 3 percent between 1941 and 1945 and output per man-hour declined 16 percent. Productivity also declined in the cement industry. In general, in those industries where total production declined because of wartime restrictions, the output per man-hour also dropped.

On the other hand, nonmanufacturing activities in direct support of the war effort report a sharp rise in productivity. The Bureau of Labor Statistics reports that: 'Special efforts were made to supply these industries with needed equipment and to keep them adequately staffed.' Among them are mining, railroad transportation, electric utilities and agriculture.

### *Mining Industry*

In the major mining industries output per man-hour doubled between

1919 and 1939. This resulted from the growth of mechanization and improved equipment. In soft coal mining 60 percent of the underground production was cut by machines in 1919 and 91 percent in 1945. The use of mechanical loading rose from one percent of production in 1925 to 57 percent in 1945 according to a report of the National Coal Association in *Mechanization*, January 1947.

The BLS states: 'Strip mining which is far more efficient than underground mining with respect to man-hour requirements per ton, contributed little more than one percent of the total coal tonnage in 1919, but almost 10 percent in 1939. A release of the Bureau of mines, dated March 15, 1947, reports that in 1945 coal production by strip mines was 19 percent of the national total. The overall increase in output per man-hour in soft coal mining between 1919 and 1945 amounted to 20 percent.

### *Metal Mining*

Productivity also rose in metal mining. More extensive mining was done by the open-cut method. Belt conveyors and larger capacity trucks were installed. In underground metal mines new drilling rigs and ore handling devices were installed. Special efforts were made to maintain an ade-



quate labor force. The production of iron ore from open pit mines increased from 62 percent of the national total in 1939 to 74 percent in 1944. The overall increase in output per man-hour in iron ore mining between 1939 and 1945 amounted to 17 percent.

### *Non-Ferrous Mining*

In both copper mining and lead and zinc mining, the BLS reports: '... sharp gains were made in ore output per man-hour.' In copper the increase in productivity was 49 percent, in lead and zinc 45 percent, between 1939 and 1945. However, the recoverable metal production per man-hour was another story. In copper mining it rose 15 percent. In lead and zinc mining it fell 13 percent from 1939 to 1943, but by 1945 had risen to within .8 percent of the 1939 level.

The deposits of copper, lead and zinc are becoming leaner in the U.S. In order to stimulate production from deposits that could ordinarily not be worked profitably, the Government made premium payments for all production above a fixed quota during the war. The BLS states: 'New processes of recovery developed for non-ferrous metals made it economical to mine large masses of easily accessible low-grade ore.'

### *Petroleum and Gas*

Output per man-hour increased 28 percent in the extraction of crude petroleum and natural gas between 1939 and 1945. The BLS states: 'The gain was attributable in part to a reduction in the proportion of labor devoted to the development of new wells.' Well drilling dropped sharply between 1941 and 1943. 'With accelerated well drilling in 1944 and 1945, the advance

in man-hour output was halted.' Nevertheless the overall increase in productivity for the major mining industries together was 18 percent between 1939 and 1945. The BLS concludes that: '... and continued increases in man-hour output may be anticipated in the mining industries.' More production, less man-hours.

### *Railroad Transportation*

Productivity in railroad transportation is 'measured in terms of passenger mileage and freight ton-mileage carried per man-hour of labor.' Between 1919 and 1939, output per man-hour rose 75 percent. More powerful locomotives, higher train speeds, larger capacity freight cars, better roadbeds and greater durability of rails and ties all contributed to the increase in productivity. During the war there was a huge increase in traffic. Output per man-hour rose 48 percent between 1939 and 1944. The peak of traffic was reached in 1944. Due to the decline of traffic after that productivity dropped off but in the first quarter of 1946 was still 30 percent above the 1939 level. The BLS states:

The tremendous wartime gain in productivity, unlike the steady advance in the period before the war, did not arise from any fundamental improvement in operating methods, but resulted in large part from more complete loading of cars. It is apparent that the volume of traffic carried per man-hour depends, to a great extent, on the average load per car, since an increase in the average load does not require a proportional increase in the amount of labor.

During the peak year of 1944, the freight ton-mileage was more than twice as great, the passenger mileage four times as great, and the volume of freight and passenger traffic 144



percent higher than in 1939. This was done with almost no additions to rolling stock. 'Both passenger and freight cars were more fully loaded and more continuously used.'

Since the war the volume of traffic and the utilization of car capacity have declined. The BLS states that the latter factor accounts for the recent severe shortage of freight cars. A survey made by the Securities and Exchange Commission indicates that the railroads are planning capital expenditures for new equipment on a larger scale than since 1939. Track maintenance and yard operations will be further mechanized. Modern locomotives, rolling stock and communications equipment will be installed.

In view of a lower volume of traffic, the new equipment will permit retirement of older installations. The BLS concludes: 'After the initial readjustment to lower volume of traffic, however, the long-term upward movement of productivity will doubtless be resumed.' This spells more production with less man-hours of labor. That's how technology works.

### *Electric Utilities*

The electric energy distributed by utilities per man-hour more than doubled between 1917 and 1939. Between 1939 and 1945 output per man-hour rose 91 percent above the 1939 level. This great advance in productivity has resulted from the use of larger-capacity equipment at higher pressures, and temperature, increased fuel efficiency, and improved methods of handling fuel, better transmission and distribution systems permitting a decrease in power losses and a reduction in the amount of labor devoted to maintenance and repair.

Another important factor has been the increase in the amount of energy consumed per customer. This permits a reduction in labor devoted to instal-

lation, maintenance and clerical work. The BLS reports: 'The rapid increase in output per man-hour during the thirties parallels a rise in the amount consumed per customer, from 2,900 kilowatts in 1934 to 3,600 in 1939.' Total demand for energy and the average consumption per customer both went up sharply during the war.

After the war both the above factors declined resulting in a small decline in output per man-hour. The BLS concludes:

As in the case of the railroads, the decline in productivity will probably be of brief duration. In the longer run, there will doubtless be continued advance in the man-hour output. The indications are that the electric utilities are planning moderate increases in capital expenditures over the prewar averages and continued improvement of operating efficiency may be anticipated.

Here it is again, more production with less man-hours of labor.

### *Agriculture*

Correct information on output per man-hour in agriculture is hard to get, since data are not available on the average hours per worker. An index of output per worker (including proprietors), however, is available. Between 1919 and 1939 output per worker rose 25 percent. Output per worker rose about another 25 percent between 1939 and 1945.

The chief causes were mechanization, improvement of farm practices, improved plant varieties, improved breeding and feeding practices and pest control.

The BLS reports: 'It is worthy of note that the wartime advance in productivity was achieved despite the restrictions on the production of new farm equipment.' The Department of Agriculture in a release dated April 27, 1947, quotes Sherman E. John-



son, Assistant Chief of the B.A.E., as follows:

'In 1945 one hour of work resulted on the average in about one-third more milk, one-half more corn, and  $2\frac{1}{2}$  times as much wheat as in 1920. Farmers use less than two-thirds as much labor per unit of product today as they did in 1920.

Now that the war is over, the BLS reports:

Equipment purchases will now be made at an increased rate, and many new machines will probably be introduced. . . . Continued progress may be expected in the development of superior plant varieties, improved methods of pest control, greater control of erosion, and better breeding practices. Thus, the upward trend in productivity will doubtless continue.

Technology works the same in all fields. More production, less man-hours.

### *Significance of Changes*

Output per man-hour together with hourly earnings determines unit labor cost, i. e., the wage payments made per unit of product. In 32 manufacturing industries, unit labor cost increased between 1940 and 1944. However, the trend was reversed in 1945 when unit labor cost declined in 11 industries despite higher wage levels in all of them. In the mining industries the wartime increase in unit labor cost was lower than in manufacturing. In railroad transportation unit labor cost declined 5 percent below the 1939 level.

This means that railroad workers got 5 percent less in wage payments for each unit produced. The BLS reports: 'The decline in unit labor cost was even more marked for electric power. In 1945, wage payments made per kilowatt-hour of electric energy distributed were 28 percent lower than

in 1939.' In those industries where productivity rose the most, the average hourly earnings declined the furthest. Thus, rising productivity plus falling unit labor costs spells less purchasing power paid out for a greater production.

If hourly wages are increased to compensate for increased output and falling unit costs, then total purchasing power remains about the same. However, this has not been the case. Between 1919 and 1939 average hourly earnings in manufacturing increased 28 percent, but output per man-hour rose 125 percent. During this period the BLS states that unit labor costs dropped 44 percent and wholesale prices of manufactured goods 38 percent.

Thus, we see that besides the great number technologically displaced from the economic circle, those who manage to stay inside fall ever further behind. In other words, the rich get richer, and the poor get more of the same. The BLS states:

The gains in living standards made possible by productivity advance will be realized only if employment is maintained. . . . this means that production and demand must increase year after year at a rate sufficiently great to accommodate both the increase in the size of labor force and the rise in productivity. . . . The challenge may be whether the economy can adjust itself to increasing productivity, without suffering unemployment, once war-accumulated demands are exhausted.

It's a good trick, if they can do it. But, the American Price System has never done it as yet. The physical factors which caused our past expansion have ceased to operate. A Price System must expand, or die, after technology enters the picture. As far as we are concerned, the Price System can't die too quickly.



# Technocracy and Your Trade

Foundry Workers—Part 2

By Organization Division, 8741-1

The first part of this article was published in the September-October 1946 **GREAT LAKES TECHNOCRAT**. It dealt principally with molders and the advance of technology in the foundry industry in general. However, molders comprise only about 30 percent of the production workers in foundries. There are many other occupations. Among the most important, making up the bulk of employment, are coremakers, patternmakers, chippers and grinders, casting inspectors, foundry technicians, sand mixers and melters. Let us see what the prospects are for these occupations. The data herein are taken from Bulletin No. 880 of the U. S. Bureau of Labor Statistics unless otherwise stated.

## *The Coremaker*

'Coremakers prepare the bodies of sand, or "cores", which are placed in molds to form hollows or holes required in metal castings.' As molten metal is poured into the mold, it flows around the core. After the casting has cooled off, the mold, including the core, is removed, thus leaving the desired cavities, holes, etc. The cores are shaped from a special type of sand mixed with a binder.

Some cores are small and simple in shape. Others are larger or more complex. This gives rise to a distinction in coremaking between the highly skilled journeyman, the semi-skilled worker, and the machine coremaker. The qualified journeyman can make any type of core. The semi-skilled worker usually works where a large number of simple and identical cores are made. This is also the field of the machine coremaker.

The journeyman coremaker constitutes a relatively small and declining group. Machine methods are displacing his skill to an increasing extent. Machines are also taking over an ever larger part of the operations from the semi-skilled specialist. The BLS observes: 'Coremaking by means of the turnover (or "roll-over") draw machines eliminates hand work in con-

nection with ramming of the sand and withdrawing the core, and to this extent reduces skill requirements.' The machine requires little more than the properly timed use of hand and foot controls.

## *'We Who Are About To Die . . .'*

The extrusion type coremaking machine or the core blower require only routine machine-tending duties. For varying types of intricate cores, machines are not yet suitable. This is the special field of the journeyman. However, the BLS states that: 'In the longer run . . . a significant reduction in journeymen employment may result from continued technological change.' Prospects point to the continued mechanization of coremaking. Journeymen who are affected by this process will be able to adapt themselves readily to machine operations because of their all-around skill.

The BLS states: 'The growing use of coremaking machines will tend to expand the total of machine-operating jobs. However, since the newer machines also increase output per man-hour, the actual number of jobs may not be materially increased.' This statement will go down in the history of philosophy. If jobs are not 'ma-



terially increased,' what happens to them? Are they materially decreased, or do they remain materially static? Even just an itsy bitsy change one way or the other would be a material increase or decrease.

Maybe the BLS is trying to say, in a polite way, that an increase in output per man-hour spells a decrease in total man-hours of labor. Be that as it may, the BLS never fails to offer a plum to any group of workers about to be displaced by technology. To the journeyman coremaker, it offers the prospect that his displacement by technology will 'create some demand for journeymen in supervisory positions.' Since there were 30,000 journeymen coremakers employed in 1944, the castings industry now has a happy backlog of potential straw bosses to draw upon. *Veni, vidi, vici.*

### *The Patternmaker*

'Patternmakers are the highly skilled craftsmen who construct patterns and core boxes (forms used to shape molds and cores) for castings.' About 14,000 journeymen patternmakers were employed in 1944. Around two-thirds of them construct wooden patterns and one-third work in metal. The BLS observes:

Wood patternmakers can qualify for nearly every kind of skilled wood working job—cabinet making, for example. Metal patternmakers are suited for many types of machine shop work, including the jobs of machinist, machine-tool operator, and lay-out man.

The patternmaker works from a blueprint. He studies the type of casting required and plans the pattern. The construction is done with power and hand tools. The wood man uses power saws, borers, lathes, planers, band saws and sanders. Metal men use engine lathes, drill press, milling

machine, power hacksaw, grinder and shaper. After fabricating the various parts, the patternmaker assembles the several segments. 'A high degree of accuracy is required, since any imperfection in the pattern will be reproduced in the castings made from it.'

*Business Week* for May 3, 1947, in an article on foundry mechanization, notes: 'Some foundry operations don't fit into mechanization-pattern making, for example.' This may be so, to a large extent. Nevertheless, the casting industry is subject to continuous technological change. Die casting, the permanent mold process and the still newer method of cold extrusion of steel are affecting and will affect the position of the patternmaker to a great extent. Cold extrusion of steel, the Neumeyer method, was developed in Germany. A report of the Technical Industrial Intelligence Division, quoted by *Federal Science Progress* for May, 1937 says of this method:

Cold extrusion of steel opens up an entirely new field. The fact that the Germans were able to make cold steel flow by means of pressure exerted in the same manner that we have extruded tin, lead, copper, brass, aluminum, etc., opens up vast possibilities, for making many different end products at greatly reduced cost. The dimensions of the cold extruded parts are so accurate that in many cases they will replace parts now made of malleable iron, grey-iron, drop forgings, or parts completely machined from bar stock, without any machining at all. This in itself will make great savings in the cost of production of the finished part

So the patternmaker is not immune to the impact of technology. The BLS states that the demand for patternmakers is not likely to exceed the supply in postwar years, and that



opportunities to enter the vocation will be limited by replacement needs. On the basis of deaths and retirement, openings will be limited to about 2,000 in the next five years. The BLS thinks that after the accumulated demand for civilian durable goods has been met, the number of patternmakers' jobs will decline. However, not to show partiality, the BLS also offers unemployed or displaced patternmakers a plum to look forward to.

In case the worst comes to the worst, they can always be advanced to supervisory positions or get jobs in related fields, such as skilled wood-working or machine shop work. What happens to the present supervisors or what the chances will be to get into a related field, if the worst comes to the worst (Depression), deponent sayeth not. All in all, the outlook isn't too brilliant for patternmakers. Technology has a way of displacing skill as well as man-hours.

### *Chippers and Grinders*

In the cleaning and finishing departments of foundries, chippers and grinders are a large group of workers. In 1944 there were 50,000 employed accounting for about 20 percent of all foundry workers. 'Chipping consists of removing the excess metal from castings by means of pneumatic hammers or hand hammers and chisels. In grinding, a mechanically powered abrasive wheel is used to smooth and finish castings. ... There are variations in skill requirements, depending on the intricacy of the castings on which work is done, the degree of precision required. ...'

In this department of foundry operations technology has made large advances. Tumbling machines, blasting apparatus and improved grinding apparatus have decreased skill requirements and boosted output per man-

hour. In addition, the increasing use of molding methods (permanent molds-die casting) which reduce the amount of finishing required are bearing down heavily on chippers and grinders.

The BLS states that although jobs in this line will be below the wartime peak, the outlook is favorable for the next few years. It adds, however, that: 'The longer-run outlook is slightly less favorable.' There should be a special medal cast (grey iron) for this type of painless prognostication. If technology is invading this field, as the facts indicate, the outlook for the workers concerned cannot be anything but dismal under the Price System. To make matters worse, the BLS has no plum to offer this group of workers when, as and if they become unemployed or displaced. Ah, me! Well, a fellow is bound to run out of plums once in a while.

### *Castings Inspectors*

These workers check the measurements of finished castings and look for defects, such as cracks or blow-holes. The more skilled inspectors check complex castings from blue-prints. The less skilled do routine checking of identical castings. These jobs are usually filled by chippers and grinders who have worked up to them. About 15,000 inspectors were employed in 1944.

The BLS states that 'a fairly strong demand for skilled inspectors is anticipated in the next few years. However, the number of applicants for the less skilled inspection work will probably exceed the openings. It adds that: 'During the next few years, the total number of inspectors employed will fall short of the peak wartime level.' This is bound to be the case. The permanent mold method, die casting, and centrifugal casting require less in-



spection than the older methods. They are coming in, and all the casting inspector can do is go out and try to get a job inspecting something else. The BLS concludes: '... a high rate of transfer into other occupations should create some openings for new entrants.' Presumably, the 'new entrants' can also, later, participate in the 'high rate of transfer' to other occupations. It's always nice to have something to look forward to.

### *Foundry Technicians*

These are the occupations concerned with quality control in the making of castings. They test molding and coremaking sands, perform chemical analysis of metal, operate machines which test the strength and hardness of castings, use X-ray and other apparatus to inspect the internal structure of castings. The BLS predicts that employment of foundry technicians should approach the wartime peak in the next few years. It adds:

Moreover, there should be a gradual expansion of employment opportunities, resulting from the long-run trend toward greater use of scientific methods in casting metal.

Foundry technician, although numerically small, is a growing occupation. This makes sense. As technology moves deeper into the castings industry, there will be more call for technical brains, and less for handicraft skill and plain muscle work.

### *Sand Mixers*

Sand mixers clean the sand used in molding, moisten it as required, and mix it with the correct proportions of binding ingredients. The mixing is done with hand shovels or mechanical mixers. The work can be learned in a short time. In 1944 there were about 10,000 sand mixers employed. The

BLS states that: 'The number of jobs for hand and machine sand mixers during the next few years will be below the wartime level.'

This is understatement with a vengeance. As a matter of fact, sand mixing is doomed to become a 'has been' occupation before very long. Technology is moving in rapidly.

*Business Week* for May 3, 1947, carries a story on foundry mechanization. This states, in part:

A steady increase has been noted in the use of mechanical equipment for the preparation and conditioning of sand. ... At Pohlman (Pohlman Foundry, Buffalo, N. Y.), a centralized sand system is installed. In the central miller, the sand is cleaned and mixed with binders. It is delivered through a conveying system to a series of molder stations located throughout the plant.

The story then goes on to say that at one point the sand is fed into a device that by centrifugal force throws it into the mold frame around the pattern and packs it tightly. At another point sand travels overhead and is dropped through chutes into the molding machines. Excess sand and used sand drops through gratings in the floor and travels back to the central station for reconditioning and reuse.

This looks bad for the sand mixer. The BLS seems to think, however, that: '... if allowance is made for withdrawals from this occupation, there should be some openings for new workers.' That's a hot one. In other words, if a dozen sand mixers retire to live on their capital, or to join their ancestors, a dozen new jobs will be created. The BLS adds conscientiously, however: 'In the longer run period, increased use of mechanical mixing methods will reduce the need for hand mixers, but those



experienced in the use of sand-mixing machines should continue to find employment.' The answer to that is that as mechanical mixing methods become more automatic, there will be less man-hours of labor than ever. So sorry, please! No plum for the sand mixer.

### Melters

'A foundry melter operates or directs the operation of a furnace unit used to melt metal for castings.' He must charge the furnace with ingots and scrap, control the temperature, and pour off the molten metal.' 'A melter usually specializes on a particular type of furnace—cupola, open-hearth, air, electric, crucible, or reverberatory.' Melters are a small group and their skill varies with the type of furnace used. However, skill, in this occupation is a declining factor for two reasons.

Some of the responsibilities of melter is being transferred to foundry technicians. Also, technology is moving in on this job. *Business Week* states in the story previously quoted from that:

Metal technique at the Pohlman plant is being improved. The cupola in which the raw materials are melted is automatically charged. This aids in strict control of melting procedures, with resultant benefits in the properties of the molten metal, eliminates guesswork and carelessness in the preparation and placement of the charges. The molten metal will be carried in individual ladles suspended from overhead conveyor-tracks.

The BLS states that the average age of experienced melters is quite high and that, therefore, many of them will have to be replaced in the next 5 to 10 years. It predicts that: 'The number of jobs for melters should hold fairly steady for some-

time, although the skill needed will gradually be reduced.' When the time comes to replace the old-time melter, it is a fairly safe bet that automatic equipment and the foundry technician will step into his shoes. That's the way technology operates.

### Summary

There you are, Mr. Foundry Worker. Technology is invading every department of your industry. Even that aristocrat of hand skill, the pattern maker, is not safe. Both production and jobbing foundries are affected. *Business Week* states that foundry mechanization was an important feature at the annual convention of the American Foundrymen's Association in Detroit during the first week of May 1947. It states:

The trend toward mechanization is spreading downward into the smaller foundries, many of whom operate on a job basis with short runs and diverse types of castings.

There will not be any exceptions to the program of mechanization. Even materials handling will be mechanized. *Business Week* estimates that for every 100 tons of casting produced, over 16,000 tons of materials must be moved. This used to be a lush field for labor, but no more; or at least not much longer. Cranes, jibs, hoists, roller conveyors and overhead systems are being installed. So, when your skill is displaced by a machine, it will be harder than ever to get a job at ordinary labor work.

Under the Price System of trade and commerce, such as we have today, the advance of technology is an unmitigated curse to the great majority. It increases output per man-hour, but reduces total man-hours. It bloats corporate profits but shrinks total mass purchasing power. It decreases skill and increases competition for jobs. All



this is not the fault of technology. It is in the way technology is used by the Price System.

The benefits that technology could bring to all are deliberately sidetracked by the Price System for the purpose of enforcing an arbitrary set of social rules that benefit only a small minority. There is a limit to this. The American Price System has crashed into depressions four times in the last 50 years. Each one of these crashes was more severe than the one before. The next one is right around the corner. It will probably make the crash of the 30's look like a boom period!

### *The Way Out*

The Price System can do little, or nothing, to avert it. Its own Operating Rules are laying it low. Technocracy Inc. has pointed this out many times. Technocracy is the only Organization on the North American Continent that really understands what is actually going on on this

Continent today. This is because it is the only social movement that has made a scientific study of the Price System.

Technocracy invites all foundry workers to join its Organization, and to participate in getting ready for the collapse of the Price System. It is necessary to get ready in advance, so as to stall off social fascism. We need a brand new and scientific social system. The blueprints are all ready. Technocracy is constructing the pattern.

The design of a New and Better America calls for more goods and services for all citizens, for abundance, security and equal opportunity from birth to death. This does not conflict with anything that any American belongs to under the Price System. Technocracy is the indispensable social necessity, without which nothing else is of much value.

The best way to prove this to yourself is to join Technocracy and investigate the whole proposition from the inside.

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## ***Technological Controls***

'As a basic engineering material, castings affect everyone. Every time you drive your automobile, you are moving about 600 pounds of castings. A truck contains even more cast metal. Your home, if it is one of average size, has roughly 5,000 pounds of castings in it, mostly in plumbing and heating applications. Railroads consume vast quantities of cast metal. So do farm implements and almost every type of machinery . . .

'Today, spurred on by wartime discoveries as well as the perfecting of prewar processes, the foundry industry is making the most drastic changes in technique since sand molds were first introduced in making casting from fluid metal, about 9,000 years ago. Machanization is sweeping the industry, and about 60 percent of the

5,000 foundries in the United States are modernizing with new equipment.' (Herbert Fredman, staff writer, in *Commerce* magazine, March, 1947.)

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'Radioactive materials group 1, liquid or solid, must be packed in suitable inside containers completely surrounded by a shield of lead or other suitable material of such thickness that at any time during transportation the gamma radiation at one meter (39.7) inches) from and at right angles to any point on the long axis will not exceed 10 milliroentgens per hour.' (Regulation 368 (G) of the Interstate Commerce Commission for shipment of radioactive materials.) *New York Times*, April 6, 1947.



# *Each in His Own Tongue*

By Publications Division, 8741-1

## VOICE OF THE PRICE SYSTEM

### *Maybe They'll Organize*

If renters can't pay the rent fixed by the landlords, then let the renters sink or swim, live or die, survive or perish. That's the way it should be.

United States Senator Homer Capehart (Rep. Ind.) in discussing rent controls in Congress recently. (As quoted by the *U. S. A. Patriot Educator*, March 10, 1947.)

### *'Open the Door, Richard'*

The closed-shop law is a violation of the eighth commandment, "Thou shalt not steal." To steal is to take money from a man against his will. When the closed shop takes away his money, earned by the sweat of his brow, against that man's will, and uses it for purposes that that man does not approve, we have a form of stealing. The individual's stewardship or responsibility for his property before God is destroyed by the "collectivist" action of the closed shop.

From a manifesto of the American Council of Christian Churches. (As quoted by Thomas L. Stokes in his column in the *Cleveland Press*, April 28, 1947.)

### *Make It Unanimous*

I'll take a buck, and who in hell doesn't know it? But I'd like to know the guy up here who doesn't take a buck.

Confession of an unnamed Boston city councilman in connection with charges by veterans' organizations that bribes were demanded for city licenses. (As quoted by the *New York Times*, March 30, 1947.)

### *Strip Tease Economics*

People don't demand or buy new products simply because the goods are manufactured. They must first know about them and want them. You get demand by arousing desire.

Elon G. Barton, president of the Advertising Federation of America, at a weekly luncheon of the Kiwanis Club in Chicago. (As quoted by the *Chicago Sun*, October 21, 1946.)

### *High Cost of Dying*

They want to gobble up as much money as they can get from widows and orphans. Embalming a body costs only \$1.50 and they get any thing they want for it. A \$35 casket sells for \$150 or \$200. Yes, it's a mighty good racket.

W. W. Chambers, Washington, D.C., undertaker, in testimony before a Congressional committee attempting to set up a licensing system for undertakers. (As quoted by *Labor*, April 26, 1947.)

### *It's Suicide Either Way*

An armament boom is the only ultimate major alternative now visible to a decline in business. Such an armament program in the long run appears inevitable if we don't want to commit national suicide, but it isn't in sight at present.

Economic statesmanship from Wall Street, that appeared in *Barron's Weekly*. (As quoted by *Labor*, Nov. 16, 1946.)

### *No Competition Wanted*

If shippers were required to deal with each individual carrier, and such



carriers make rates without regard to the rates made by other carriers, discrimination between individuals and between communities would exist to a degree never before experienced in the history of the country. Such a situation would amount to a return to the law of the jungle with destructive competition among carriers in lieu of the long standing policy of regulated competition which prevails today.

A. H. Schwietert, traffic director of the Chicago Association of Commerce, in a talk before the Central Western Shippers Advisory Board recently. (As quoted by *Iron Age*, February 6, 1947.)

### *Playing Both Sides of the Street*

I wish to state simply and directly that I do not agree with the two resolutions which the press reports you have passed on the question of diplomatic representation at the Vatican and the recent Supreme Court decision on school busses.

I do adhere to the basic American principle of the separation of church and state.

Harold E. Stassen, self-proclaimed candidate for President in 1948 in an address before the Southern Baptist convention at St. Louis recently. (As

quoted by the *Chicago Sun*, May 10, 1947.)

### *Straight From The Horse's Mouth*

Should the State be a lay-State?

By no means, the State has to represent the Catholic Church, which is the only true church. The State has to be subservient to the Church, as the body must be subservient to the soul or all temporal matters to the eternal bliss.

Is the State allowed to grant freedom to the press?

No, for freedom of the press leaves room for a possible absence of censorship thus allowing all sorts of opinions to be printed, no matter how absurd or detrimental to the good cause they might be.

Should the Government suppress this freedom by means of preventive censorship?

Yes, of course.

Are there any other dangerous freedoms?

Yes, freedom of the press, freedom of propaganda and freedom of assembly.

Extracts from a Catechism taught in Spanish schools, (As quoted by Heinz Pol in an article in *The Protestant*, June-July, 1946.)

## VOICE OF TECHNOLOGY

### *Trouble Is, No Technology*

The cold facts are that the housing industry in this country has at all times failed to provide sufficient housing accommodations for the needs of the people. The sad fact is that housing costs too much.

As presently organized, the house building industry is tied up by the lack of a regular flow of material

and absence of centralized managerial direction, and out-moded traditionalism in handicraft methods of production.

Senator Charles W. Tobey (Rep. N.H.) in a talk before the National Public Housing Conference at the Palmer House, March 12, 1947. (As reported by the *Chicago Sun*, March 13, 1947.)



## *He Knew His Followers*

We rarely hear of the combinations of masters, though frequently of those of workmen. But whoever imagines that masters rarely combine is ignorant of the subject.

Masters are always and everywhere in constant combination not to raise the wages of labor. We seldom hear of this combination, because it is the usual state of things.

Masters, too, enter into combinations to sink the wages of labor. These are always conducted with the utmost silence and secrecy. But workmen's combinations are always abundantly heard of.

Adam Smith, in his book *The Wealth of Nations*. (As quoted by *Labor*, March 8, 1947.)

### *'Till It Is Four Years Old—'*

We know far more than any race ever knew of the inner sources in man's nature from which happiness springs; but as long as either the theological or the mystical views of life and nature are allowed to touch the growing mind of the child, all the vast resources of science, . . . for bringing peace and adventurous joy to men in their inner lives, are thrown away. It is only when no hand but that of the brave and free scholar in the scientific study of man and his history, his morality, his conduct, his relations with his fellow men is permitted to touch the child, that we can hope to usher in a time when men will neither laugh at new ideas nor crucify the only emancipators who can ever break their intellectual shackles.

Dr. Albert Edward Wiggam, in his book *The Marks of an Educated Man*.

### *It's the Price System*

We have little or no idea how the stores of energy in the heavy nuclei originated but there is every reason to believe they have been

locked up there since that dim beginning of things, two or three billions of years ago.

The liberation of the energy appears to be irreversible—how hopelessly, only the trained physicist can appreciate.

These nuclei form a precious and irreplaceable part of nature's capital assets. No one yet knows what unique uses for human welfare these stores of high-potential energy may have when they are thoroughly understood.

Meanwhile, in our ignorance, we talk of ripping them out of the rocks and using them up to meet the commonest industrial demands, which any other source of power could do as well . . . .

The almost universal absence of any sense of responsibility toward any future which extends beyond the limit of lives already in being is a grave ethical defect in our thinking.

Henry Norris Russel, director of the Princeton University Observatory, in a paper before the Conference on Science, Philosophy and Religion in its relation to the Democratic Way of Life, held last Fall at Inter national House, Chicago. (As quoted by the *Chicago Times*, September 10, 1946.)

### *Venus, Here We Come*

So far it is only this planet, as I say, that our government would make safe for capitalism.

But listen. Don't tell anybody but recently the astronomers have found that there is methane out beyond the moon in the atmosphere of Jupiter. Now Methane is the basic hydrocarbon fundamental in the building up of petroleum.

If the oil companies should hear of this discovery, don't tell, I predict that with many pious words, poured out over the radio to the interruption of one or more soap operas, I predict that with pious



words, and hiding behind your idealism, our government would begin to mess up the operation of the solar system.

The laws of the Almighty and of Isaac Newton would be attributed to the vicious party line that connects us with you know where. With civilian and military supervision, of course, we would start to lay a Big-inch to Jupiter, and Schwellenbach would chase the Commies off the moon.

Professor Harlowe Shapley, director of the Harvard University Observatory, in a talk before the Progressive Citizens of America at the Continental Hotel, Chicago, April 12, 1947. (As quoted by the *Chicago Star*, April 19, 1947.)

### *We Do It For Their Good*

The true issue in China is not Communism; it is not Russia. The simple truth is that the Chinese people are waging a struggle to free themselves from the shackles of a feudal Fascist system which for centuries has kept them in a state of semi-starvation and feudal bondage.

The Chinese people are fighting for a democratic republic modeled after our own. It is difficult for them to understand why a country which waged a similar revolution in 1776 is now trying to crush the Chinese in their own fight for independence.

Dr. Herbert Abrams, recently returned from a post with the U. S. Public Health Service in China, in a talk before the Methodist Federation for Social Service at Garrett Biblical Institute, Evanston, Ill. (As quoted by the *Chicago Sun*, January 1, 1947.)

### *'The Godless Russians'*

The local authorities are assisting us in restoring and repairing churches

destroyed by the German invaders, and supplying building materials. Our clergy are provided with all necessities.

There are at present two archbishoprics in Lithuania, those of Vilnius and Kaunas. The Catholic Church organization has remained unchanged. All 711 churches are functioning with their staffs of 1,332 clergy. The Kaunas Ecclesiastical Seminary, headed by the prominent theologian Ventskus, is graduating scores of young Catholic priests annually. Thousands of believers in Vilnius, Kaunas and other towns and villages gather as usual at Matins and Vespers. All established holidays are observed by the Church.

The Most Reverend Msgr. Reinis, Catholic (Roman) Archbishop of Vilnius, in an interview with a TASS correspondent recently. (As reported and quoted by the USSR Information Bulletin, April 30, 1947.)

### *Only Half The Story*

Nearly all the evils of society prevail most where we (Catholics) live and not where Protestants live . . . .

It is in rural America where the family life is most wholesome, and where the divorce rate is still low. On the other hand, where the Catholics live, one-half of the marriages end in divorce. It is where they live that the big motion-picture houses are located, the filthy magazine racks, the taverns and gambling halls.

Catholic (Roman) Bishop John F. Knoll of Fort Wayne, Indiana, in a talk before the National Catholic (Roman) Conference on Family Life in Chicago, March 12, 1947 (as reported by the *New York Times*, March 13, 1947, and quoted by *The Converted Catholic*, May, 1947).



# *In the Question Box*

A Word To The Wise

By Speakers Division, 8741-1

**"What will be the result to the labor unions if they are abolished by Congress?**

**"Will Labor wake up to Technocracy or will it remain dumb?"**

It is hardly likely that the labor movement will be abolished by Congress. That would not be good tactics. The forces of pro-fascism who are in control of the American Price System now are not that stupid. It is more likely that the program of social reaction calls for a severe restriction of the 'rights' and privileges of the movement. This will be the first step in a larger program to convert the American labor movement into an ally of fascism.

The fascists are moving into many key positions in the labor movement. In order to cover their activities, a big hue and cry is raised about communism. This is a part of the master plan of fascism to capture all North America. Fascism is moving into the fields of education, law, politics, business, labor, etc. The plan of operation is the same in all fields. First: infiltrate and capture the key positions. Second: subvert the institution being worked on from its original purpose or standards to others more suited to the concept of a fascist state. Third: when enough organized confusion and downgrading has been accomplished, then step in and take over all power.

The people behind this plan are what is known as the triple oligarchy. They are composed of vested interests in the fields of clerical fascism, corporate enterprise, and politics, or government. This is the same combination that has downgraded so many civilizations in the past. The

history books reek of misalliances between the nobility, the church, and the money changers. Today these same socially subversive forces operate with new names and more refined methods.

The master plan of fascism requires a smokescreen behind which it can operate safely. The reason is that all of its aims and objects are extremely odious to the true American tradition, or dream, of equal opportunity and the 'right' to pursue life, liberty, and happiness. Therefore, they move in under the guise of democracy brazenly waving the very flag their program will trample in the mud later on. But, this is not enough of a coverup. The people might catch on. So, something must be added.

In addition to the unctuous lip service to 'American Democracy' they need a 'fall guy.' There must be some one to blame, some one upon which to turn hate and prejudice loose. The communists fit this need nicely. They have everything it takes to make them good scapegoats. First: they are agents of a foreign power. Second: they are advocates of violence and political methods of reform and operation. Third: they know little, or nothing, about the physical trends or history of North America.

Hitler and Mussolini chose the communists for scapegoats for similar reasons. The pattern remains the same because the fountain heads of fascism that sponsored Hitler and Mussolini are still the same. The headquarters of fascism is still in Europe, but its main theatre of operations has been moved to North America. One of the chief parties of the triple oli-



garchy in North America, clerical fascism, has much in common with communism. For the most part, it is also an agent of a foreign power. It openly advocates social violence and political methods of operation. And, it knows little about the physical America. In addition it has one up on communism by having a socially reactionary record reaching back to the earliest pages of history.

This seems to matter little in the operation of the master plan for America. The reason they get away with it is because the clerical fascists occupy high and 'respectable' positions in the American social structure. Like Caesar's wife, they are beyond suspicion—almost, but not quite. If there is one thing the average American worships without question, it is SUCCESS. Anybody who has a fat pocketbook, a car a half a block long, or a smooth line of semantic hogwash is the archetype of what every American dreams about being. He will kowtow before this God any time, any place, and for any reason, or for no reason at all except that it's good Price System policy. The average American refuses to believe, no matter what the evidence, that people in high and sanctified places may not be what they seem to be. 'The King (SUCCESS) can do no wrong.'

However, with the communists, it's different. They as a group are at the bottom of the social ladder. They are not SUCCESSES. They do not look anything like the God of Things As They Are. In fact they look, talk and act like something foreign to this sacred concept. Their tactics are the same as those of the fascists, i.e., infiltrate, subvert, take over. The difference is that the communists are not socially reactionary. They are only socially muddle-headed and behind the times for the age in which we live. This puts them on the re-

ceiving end in the current seesaw for position and power. They get damned in advance for everything they try to do and damned afterwards for what little they accomplish. Every downgrading, corrupting, subversive social tactic that fascism is carrying out behind its smokescreen is laid to the communists. They are damned if they do, and damned if they don't. The communists have no comeback. Pot and kettle are both black. So, about all the communists can do is stand up and take it. This spectacle will become more interesting as time goes on.

The organized labor movement, like a lot of other Americans, has fallen into this fascist trap. They are so concerned with the immediate ends and objects that they lose sight of ultimate results. Many locals are so busy with red hunts that they cannot see the black flag of fascism being hoisted in their union halls. This is exactly what fascism wants. The labor movement does not know where it is being led. Pro-fascism is entirely willing to throw a few crumbs in labor's direction anytime it suits the purpose. At the time of this writing (Spring, 1947) voluntary wage increases are being granted to unions by corporation after corporation. At the same time, the most vicious anti-labor bill in American labor history is being pushed through Congress.

Already 13 states have banned the 'closed shop,' 3 States are submitting constitutional amendments to the voters on the question, and in 3 other States limits on the 'closed shop' are in effect, while in 3 States the 'check off' of union dues is prohibited. Labor is unanimously accepting the crumbs and only mildly protesting against the club. One might ask labor if it ever read the story in the good book about Esau who sold his birthright for a mess of pottage?



You are right, my friend. The American labor movement is short-sighted. It has not produced a labor statesman since the days of Samuel Gompers. That leader set the pattern for the American labor movement. It consists of three points, largely. These are: higher wages, shorter hours, better conditions. It was a pattern of operations perfectly adapted to an expanding Price System economy, in which Gompers lived. The American Price System, however, ceased to expand many years ago. Consequently, labor should have adopted a broader and longer range social program. It should have identified itself with the General Welfare of all Americans. This, it has failed to do.

As a result, organized labor has become just another minority pressure group within the framework of the Price System. It fights solely for special advantages for its members. These can only be acquired under the Price System at the expense of other minority pressure groups or of society as a whole. By this token, organized labor has alienated itself from the main stream of American hopes and aspirations. It stands, in splendid isolation, wide open to every economic and political storm that blows. Is this good labor strategy?

There are about 55,000,000 legitimate workers in the American labor force. About 15,000,000 of them are lined up in organized labor. At least 40,000,000 are unorganized. To be sure, 15,000,000 is, potentially, a powerful minority group. That presupposes, however, that they are correctly led. Also, we must remember that these 15,000,000 workers are not owners. All they have to sell is their labor power. Under the Price System of trade and commerce, technology is manipulated so that hourly wage rates will never catch up with increases in

output per man-hour. The market for labor power is a diminishing quantity. One might ask labor whether the dog wags the tail, or whether the tail wags the dog?

Technocracy has no quarrel with organized labor. It has pointed out on many occasions that the organized bargaining power of unions is necessary, under the jungle law of Price System operations. Every worker, if he is smart, will belong to a union. All the owners have unions, don't they? Well, it's only common sense. It's the best way to obtain immediate economic benefits. However, there is a longer range objective which is supremely important to labor also. That is nothing less than the General Welfare and common good of all citizens. In the end, organized labor will rise or fall with that. The possibility of the General Welfare being realized is just what fascism is trying to kill off. Yes, labor is tactically smart but strategically stupid.

If organized labor does not wake up to this higher concept of citizenship soon, it is going to be too bad for the unions. They will become converted into stooges for a fascist state as they were in Germany and Italy, and as they are in Spain and Argentina. Organized labor must purge its ranks of native fascists. The more 'respectable' they seem to be, the more dangerous they are. Organized labor must stop being led around by the nose in idiotic red-hunts against a non-existent communist menace. Does labor have enough brains and guts to do this. It remains to be seen.

Communism is no menace in North America. Fascism is. Communism may be sufficiently radical for European conditions; but it is too bourgeois for America. It is hopelessly inadequate for the social change required here. North America's problems will



not yield to social violence, political methods, or foreign ideologies of either the left or right. There is only one way to combat communism on this Continent. That is to adopt a more revolutionary social doctrine. This will also defeat fascism. There is only one Body of Thought native to the soil of North America that fits the bill. That is Technocracy. It has everything. Technocracy is at one and the same time the most truly conservative and the most utterly revolutionary social movement in existence.

Technocracy is anti-fascist. What is more important, it is also anti-Price System. This is the basic requirement for social change. No other social movement meets it. The Price System of trade and commerce is the root cause of most of our modern so-

cial problems. Ergo, abolish the Price System and we clear the way for a solution of our problems. That is the revolutionary part of Technocracy. The conservative part appears as follows: Nearly all the worthwhile things in our modern American culture came about as a result of the advance of Science and Technology. Technocracy seeks to conserve and enhance these things. These facts require a little study to understand. The Body of Thought of Technocracy is an open book. Every citizen is invited to join Technocracy and investigate it from the inside.

Organized workers everywhere in North America are invited to join. Technocracy is non-political, non-sectarian, and non-profit. A word to the wise is sufficient!

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## ***Labor—Take Notice***

Two new machines which will affect the jobs of thousands of telephone workers are underlying causes of the telephone strike according to Raymond C. Brantner, vice-president of the Federation of Telephone Clerks of Illinois. One of the machines handles long distance calls, 'automatically recording the number from which the call is placed, the number being called, length of the call and the charges. It then debits the account. The data is then automatically played back to an even more complex device which makes a complete bookkeeping entry of the call.' The machine is now being tested in Pennsylvania.

'We're striking for a great deal more than \$12 a week. We are striking for our very existence,' said Brantner. If the machine is placed in use there will be no 'jobs for toll billers, sorters,

checkers, rate clerks, bookkeepers, ledger clerks, filing clerks and balance finders.' The other machine being tested in Rochester enables a person to dial other cities without an operator handling the call. (*Chicago Daily News*, April 7, 1947.)

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The prefabricated housing industry produced 37,200 units in 1946. Production for 1947 is estimated at 100,000 or more units. Prefab manufacturers are stepping up production rates despite many obstacles. Among these are: 1. Local building code restrictions; 2. Opposition by local builders; 3. Opposition by labor unions; 4. Lack of qualified dealers; 5. 'FHA sluggishness in approving loans on prefab homes;' and 'public proneness to regard prefabs as "temporary homes."' (*Wall Street Journal*, March 18, 1947.)



## NOTICE

### To Our Readers

If you will send in seven names to 'Great Lakes Technocrat,' together with a one dollar bill we will mail each one a sample copy. 7 for \$1.00.

## Facts in a Nutshell

Orders for new generating equipment now exceed 13,000,000 kilowatts. 'Present utility generating capacity is about 63.2 million kilowatts,' according to H. S. Bennion managing director of the Edison Electric Institute. 'Based on estimates from a cross section of electric companies, the growth of the load of the utility industry in 1947 is expected to be slightly over 3 million kilowatts and the growth of the load in 1948 approximately the same. This is double our former notions of the normal rate for growth of load,' said Mr. Bennion. (*Wall Street Journal*, April 3, 1947.)

Production of Rototillers, which plow, disc and harrow in one operation was begun on April 1, 1946. Since then 30,000 units have rolled off the line and were sold. (Release of Frazer Farm Equipment Corporation, April 14, 1947.)

A Twentieth Century Fund survey points out that large-scale soil conservation and land development programs could increase agricultural production by 50 percent.

Public eating places account for the sale of one-third of all farm products (from release of American Dairy Association).

Nearly a third of the cost of distributing goods is accounted for by retail trade, says a Twentieth Century Fund investigation.

## Some Technocracy Section Addresses in Great Lakes Area

- 8040- 2—Box 356, Ambridge, Pa.  
8041- 1—1613 East 51st St., Ashtabula, Ohio.  
8141- 3—39 E. Market St., Akron, O.  
8141 -7—P. O. Box 270, Barberton, O.  
8141-14—P. O. Box 553, Kent, Ohio.  
8141-15—10537 St. Claire Ave., Cleveland 8, Ohio.  
R. D. 8242—c/o John Reynolds, St. Clair, R. No. 2, Mich.  
8341- 1—3242 Monroe St., Toledo 6, Ohio.  
8342- 1—9108 Woodward Ave., Detroit 2, Mich.  
8342- 2—112 N. Tasmania, Pontiac, Mich.  
8343- 1—6717 N. Saginaw St., Flint 5, Mich.  
8439- 1—37 E. Fifth St., Dayton 2, Ohio.  
8741- —3178 N. Clark St., Chicago 14, Ill.  
8743- 1—3546 N. Green Bay Ave., Milwaukee 12, Wis.  
8844- 1—620 S. Broadway, Green Bay, Wis.  
8844- 2—1011 W. College Ave., Appleton, Wis.  
9038- 1—4518 Delmar Blvd., St. Louis, Mo.  
R. D. 9041—2428 13th Ave., Rock Island, Ill.  
R. D. 9140—18 N. 5th St., Keokuk, Iowa.  
R. D. 9344—Box 572, Uptown St. Paul 2, Minn.  
9344- 1—1924 Lyndale Ave. So., Minneapolis 4, Minn.  
9439- 1—P. O. Box 209, Kansas City 17, Kan.  
9648- 1—819 N. Duluth Ave., Thief River Falls, Minn.  
R. D. 9737—4442 Bayley, Wichita 9, Kan.



# TECHNOCRACY

## NORTH AMERICA'S ONLY SOCIAL DYNAMIC

### WHAT?

★ Technocracy is the only North American social movement with a North American program which has become widespread on this continent. It has no affiliation with any other organization, group or association either in North America or elsewhere.

★ The basic unit of Technocracy is the chartered Section consisting of a minimum of 25 members and running up to several hundred.

★ It is not a commercial organization or a political party; it has no financial subsidy or endowment and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are \$6.00 which are paid by the member to his local Section.

★ Members wear the chromium and vermilion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

### WHERE?

★ There are units and members of Technocracy in almost every State in the U. S. and in all Provinces in Canada, and in addition there are members in Alaska, Hawaii, Panama, Puerto Rico and in numerous other places with the Armed Forces.

★ Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the location of the nearest Technocracy unit.

### WHEN?

★ Technocracy originated in the winter of 1918-1919 when Howard Scott formed a group of scientists, engineers and economists that became known in 1920 as the Technical Alliance—a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934, Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundations of the present nation-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

### WHO?

★ Technocracy was built in North America by North Americans. It is composed of North American citizens of all walks of life, Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this continent. Membership is open only to North American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective political office or active office in any political party.)

★ Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher or housewife—as long as you are a patriotic North American—you are welcome in Technocracy.

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**Men of thought, be up and stirring  
Night and day!**

**Sow the seed, withdraw the curtain,  
Clear the Way!**

**Men of action, aid and cheer them  
As ye may!**

**There's a fount about to stream,  
There's a light about to beam,  
There's a warmth about to glow,  
There's a flow'r about to blow.  
There's a midnight blackness changing  
into gray.**

**Men of thought and men of action,  
Clear the Way!**

**Charles Mackay, Scotch Poet  
(1814-1889)**